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A FIELD DEMONSTRATION OF THE EFFECTIVENESS AND FEASIBILITY OF EARLY ADMISSION TO SCHOOL FOR MENTALLY ADVANCED CHILDREN.

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A 4-YEAR STUDY DEMONSTRATED THE FEASIBILITY AND EFFECTIVENESS OF EARLY ADMISSION TO SCHOOL FOR MENTALLY ADVANCED CHILDREN. APPROXIMATELY 800 CHILDREN WERE SCREENED TO LOCATE THE 36 CHILDREN WHO ENTERED KINDERGARTEN BEFORE THE USUAL TIME. CRITERIA FOR EARLY ADMISSION INCLUDED AN INTELLIGENCE QUOTIENT APPROXIMATELY 130 OR HIGHER, SOCIAL MATURITY AT LEAST 1 YEAR ADVANCED, ABSENCE OF HEALTH PROBLEMS, SATISFACTORY EMOTIONAL DEVELOPMENT, APPROVAL BY KINDERGARTEN TEACHERS AFTER OBSERVATION OF A KINDERGARTEN VISIT, AND PARENTAL APPROVAL. DATA WERE COLLECTED ON ATTITUDES, COSTS, MODIFICATIONS REQUIRED IN ACTIVITIES OF PROFESSIONAL STAFF, AND ON ACHIEVEMENT OF PUPILS. CHILDREN ADMITTED EARLY TO SCHOOL ON THE BASES OF MENTAL, PHYSICAL, SOCIAL, AND EMOTIONAL READINESS DID AS WELL IN ACADEMIC WORK AS THEIR OLDER CLASSMATES OF LIKE ABILITY IN KINDERGARTEN, FIRST, AND SECOND GRADES. ON SOCIOMETRIC MEASURES THERE WAS NO EVIDENT DIFFERENCE BETWEEN EARLY-ADMITTED CHILDREN AND OTHERS. THE PROCESS OF DEMONSTRATION WAS ANALYZED IN TERMS OF INNOVATION AND CHANGE. INFORMATION ABOUT THE DEMONSTRATION WAS DISSEMINATED WIDELY THROUGH PUBLIC INFORMATION MEDIA. (JM)

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A FIELD DEMONSTRATION OF THE EFFECTIVENESS AND FEASIBILITY OF EARLY ADMISSION TO SCHOOL FOR MENTALLY ADVANCED CHILDREN

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December, 1965

A Field Demonstration of the Effectiveness and Feasibility

of

Early Admission to School for Mentally Advanced Children

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December, 1965

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INTRODUCTION

Before about 1850 the schools in the United States were relatively ungraded in the sense of the chronological grade-by-grade organizational structure of today, especially in the beginning years of the elementary period. Tutorial and very small group instruction predominated. There were few firm regulations about age for beginning school. A trend toward a step-by-step, chronological age-grade organization began at about the time of the Industrial Revolution and it spread rapidly, especially in the large centers of population. In rural areas without enough children to establish separate grades taught by separate teachers the curricula in the one or two-room elementary schools were given a grade-by-grade structure.

Early in the twentieth century a reverse trend began. It was encouraged by emerging knowledge about individual differences in children and by a developing science of pedagogy. Efforts at school reorganization to provide for individualization of instruction saw a peak of activity in the 1920's. Those efforts portended promise in breaking up the graded school system pattern. In spite, however, of continuing to gather strength in theory, practical application seldom got beyond attempts at individualized instruction within grades by homogeneous grouping and within classrooms by grouping for instruction.

Today's public schools remain overwhelmingly graded. The National Education Association (1959), reports only two per cent of the schools as being ungraded. The prevalence of semi-annual or more frequent promotion has declined over the past thirty years, from seventy-three percent in 1937 to fourteen percent in 1957.

Yet, there is now a new surge of interest in making the schools more flexible in grade structure, in pupil progression and in curriculum. Examples are found in ungraded primary and elementary schools, team teaching, efforts to articulate different school levels, and in curriculum reorganization. They are encouraged by applications of the social and behavioral sciences along with substantial technological developments.

The investigation reported here was planned in the context of resurgent concern for improving the educative process through increased flexibility of admission and progression through an increasingly flexible and varied curriculum. While focussed on the specific problem of early admission of mentally advanced children to school, it is intended to provide information applicable both to the general matter of flexible admission to school and to ways of effecting such innovations.

THE PROBLEM

The purpose of this investigation has been to show the effectiveness and feasibility of early admission to school for mentally advanced children. Effectiveness refers to how early admission operates in practice. Feasibility refers to the suitability of early admission, including the probability that it will continue, once begun.

Early admission to school, whether to kindergarten or first grade, is a special case of acceleration. Over a forty year period investigators have reported favorable consequences of early admission to school for children of gifted and superior intellectual levels, but the practice has not been widely adopted or frequently used by school systems in the United States (Anderson, 1961). Early admission has been highly recommended as the most favorable of all forms of acceleration (Worcester, 1956). Yet, it has been neither generally well-known nor well-understood among practicing educators. Therefore, a field-demonstration of early admission was undertaken so the processes and the results of the demonstration might be called to the attention of educational leaders. The intent was to bring the highly significant research finding supporting the practice into fuller use.

Demonstration Aspect of the Problem

The demonstration was to be instituted on the initiative of a complete school system in all of its elementary schools. That was considered necessary for four principle reasons:

1. The major prior experience reported with early admission was based on situations in which parents requested early admission consideration for their children. Thus, only those children were considered whose parents learned about the possibility and initiated requests. The demonstration plan, instead, was for the school system to take the initiative and to strongly encourage all parents to allow their children to be evaluated for consideration for early admission. Also, in many prior instances where the consideration of a child for early admission depended upon the initiative of the parents, it was required that the parents arrange and pay for the required psychological evaluation on a private basis. Thus, it was desirable to demonstrate and evaluate an early admission program in which the school district policy and practices made the opportunity fully available to all children in the community on the initial initiative of the school authorities and at no cost to the parents.

2. The early admission practices which were described in the literature generally laid the full burden of recommendation upon a school psychologist, sometimes one not in the employ of the school system. In contrast, the demonstration was intended to involve teachers, administrators, supervisors, school social workers, school psychologists and others in the school system who could contribute to improving the selection procedure for the children to be admitted early.

3. It was decided to work with a complete school system which had never practiced early admission in order to ascertain what problems would be encountered and how they could be solved when the practice was started and carried on for several years. Hopefully, the information gained would be of practical value to other school systems which might embark on the same course in the future.

4. A crucial part of the feasibility test of early admission was to ascertain if a school system, being stimulated to start the practice by professional assistance and outside funds, would find it appropriate to take on the practice as a continuing one with the costs and professional activities coming from the school district's resources.

Research Aspect of the Problem

Previous studies have shown clearly that early admission to school can be expected to have generally salutary effects on the children and their educational development when conducted under certain conditions. Therefore, it was unnecessary to research that matter with rigor. However, there remained the broader need to assess the impact of the application of a systematic policy and practice encouraging early admission in a school system. Questions to be answered regarding both effectiveness and feasibility are listed below:

1. What additional costs are incurred for instructional and ancillary services when a school system initiates and conducts early admission to school for mentally advanced children?
2. What changes in work loads and functions occur for teachers, supervisors and other relevant personnel on account of an early admission program?
3. What changes in attitudes toward the practice of early admission to school take place on the part of educators, related professional workers, parents and the total community when they experience the practice in their own school system?
4. What are the professional judgments of the chief school officers of the school system (superintendent and assistant superintendent) about the applicability, effectiveness and feasibility of early admission in terms of policy and practice as a result of their direct experience with the demonstration?
5. What official policy actions of the Board of Education of the school system can be traced to experience with early admissions, and what do those actions reveal about its effectiveness and feasibility?

In addition to the above questions, it was intended to add information which might fill gaps in existing knowledge about the academic and social development of children who are admitted early to school. Early admitted children are reported (Hobson, 1963) to be advanced over older children in the same grade, generally. But there was limited information which compared early admitted children with equally bright older children in the same grade. Therefore, it was planned to compare early admitted children with equally bright regularly admitted children in the same grade on academic achievement and social standing.

Dissemination Aspect of the Problem

One of the distinguishing objectives of this demonstration was to provide a high degree of visibility for the findings while the project was in progress in addition to arranging wide-spread distribution of information about it. In order to accomplish that objective a number of means were planned to display the demonstration in operation. A variety of dissemination activities were projected in different media and to particular target audiences.

1. Radio:
    a. Local broadcasts in the community of the demonstration aimed at interpretation of the project to the general public.
    b. Long-range radio broadcasts over major stations to give information about the project to the general public.
2. Television:
    a. General information to typical audiences on both national commercial network news and events shows and on local shows of the same nature.
3. Newspapers:
    a. Press interview and releases to the local newspapers serving the demonstration location.

   b. Releases to wire services for national and international dissemination.

   c. Topical interviews for newspapers following or coincident with lectures to lay or professional audiences in various localities.

4. Periodicals:

   a. Publications aimed at audiences of the "thought leader" type, with reports of the nature and progress of the study.

   b. Professional journals and newsletters which reach individuals who have decision-making or decision-recommending functions with respect to school programs.

5. Presentation of Papers and Lectures:

   a. Lectures to lay or mixed professional and lay audiences, giving information about the nature and progress of the project.

   b. Descriptive lectures and interim reports of findings to professional groups who have decision-making or decision-recommending functions regarding school programs.

6. Project-Sponsored or Co-Sponsored Conferences:

   a. Conferences called for the purpose of consultation and dissemination of information to professional groups.

REVIEW OF LITERATURE

History of Individualizing Instruction

The history of organizational provisions for individualization of instruction dove-tails that of the development of the graded school in America (Reavis, 1931, p. 177). The graded school, which had its roots in the Prussian educational system (Judd, 1918) was based on the idea of increments of accomplishment, which, as a basis for school organization, preceded the nineteenth century (Coxe, 1931, p. 168). The graded school was composed of units, closely related to what we now think of as grades, each having definite allocation of subject matter, entrance standards, and standards of achievement (Coxe, 1931, p. 168).

Concern that the graded system was not meeting the needs of all students was a concomitant of the rapid development of the graded system in American schools in the second half of the nineteenth century (Coxe, 1931, p. 168). Rapidly expanding population, growth of cities, multiplication of schools, increasing demand for school opportunity for all children, larger enrollments, and differential grouping of children were forces which influenced the development of the graded system (Coxe, 1931, p. 169; Butts and Cremin, 1953, p. 275).

However, the graded system was not without its critics. Coxe (1931) has summarized the criticisms which had their origins in the thinking of such educators of the last half of the nineteenth century as E. E. White, P. W. Search, H. L. Allen, Ellwood Cubberley, Henry Emerson, Edward Delano, and J. W. Akers. Coxe's summary follows:

> 1. It [graded system] assumes uniformity of ability for all children.
>
> 2. It assumes uniformly good teaching throughout the school.
>
> 3. It forces uniformity of attainment upon every child ('Intellectual lock-step'; 'Procrustean bed').
>
> 4. It produces pressure and over-tension, particularly with the bright pupil.
>
> 5. A pupil who fails is obliged to repeat an entire year's work, often attended by humiliation.
>
> 6. Efforts to promote at any time have proven unsuccessful.
>
> 7. The tendency of the graded system is to hold back the bright child.
>
> 8. The course of study is usually made to fit the child of average ability, thus failing to make provisions for the bright or the dull child.
>
> 9. The teachers in the graded system tend to become isolated, independent factors of the system of which they are a part.
>
> 10. The graded system, although practical in cities and towns, is impractical in villages and rural districts. (Coxe, 1931, p. 170).

Such early positions concerning the graded system led to constructive endeavors to eliminate some of the disadvantages. Most of the attempts to eliminate limitations took the form of modifications and not substitutions (Coxe, 1931, p. 170), and most of the modifications "....effected changes in the procedures relating to the promotion of pupils" (Otto, 1934, p. 201).

Early attempts at modifications were chiefly changes in the length of promotion periods in such a way that the varying abilities of pupils were taken into account (Coxe, 1931, p. 170; Otto, 1934, p. 203). Harris (1873, p. 260-269) initiated a ten-week quarterly plan of promotion in

St. Louis in 1870. It was possible for a child to repeat only that quarter in which he was unsuccessful, without changing the grade system. Likewise, a capable child could be promoted without skipping a whole grade (Harris, 1873, p. 261). Numerous cities soon shifted to the semi-annual promotion plan in order to accommodate individual differences (Otto, 1934, p. 203).

Other early attempts to adjust the schools to individual differences among children without foregoing the traditional grade or class organization took the form of grouping, enrichment, and tutorial or coaching plans (Coxe, 1931, p. 171). Shearer (1898, p. 59-75) developed what was known as the Elizabeth Plan in 1886. It did not modify promotion policy, but organized within each grade several groups of pupils based on attainment levels, aiming at improving the effectiveness of teaching and flexibility in grouping. Typical of plans for enrichment was one developed in North Denver in 1895. Curricular enrichment was affected by encouraging children to do extra sssignments (Whipple, 1924, p. 6). The coaching or tutorial plan developed in 1898 in Batavia, New York, provided two teachers to a room, allowing one teacher to work intensively with students who could benefit from individual instruction (Coxe, 1931, p. 171).

The major characteristic of early plans for individualized progress in the school was the modification of existing school organizations while maintaining the graded system. One notable exception was the "Pueblo Plan" originated in Pueblo, Colorado, during the years 1889-1894 by P. W. Search (Henry, 1920, p. 13). Dissatisfied with the "lock-step" nature of the graded system, Search originated a plan to do away with traditional class organization and allow the individual to determine his own rate of progress. He stated:

> "The fundamental characteristic of the plan on which the schools are organized is its conservation of the individual. The pupil is placed purely with reference to where he can get the most good for himself".
> (Search, 1894, p. 154)

Search's plan, which involved two thousand pupils and fifty teachers (Search, 1894, p. 157), was short-lived and did not survive his tenure as superintendent of schools (Washburn, 1926, p. 59).

Whether Search's plan was too ambitious, too radical, or not feasible is not clear. But it is clear that plans for modifying school organization for the improvement of individual instruction met with criticism if they were suggestive of being upsetting to the existing system. Shaw (1898, p. 432) summarized the attitudes of educators, expressed at a meeting held to discuss provisions for individualizing instruction, toward school reorganization for flexibility, as follows:

> "Considered with reference to the school system, the value of any plan depends on whether that plan can be transmitted and carried on by a superintendent's successor". (p. 423)
>
> "A plan or system that is a paternal one....is not a plan that will commend itself to the minds of progressive and yet conservative educators".
> (p. 423)

The attitudes toward school reorganization were similar to attitudes toward policies of "double promotions". Prince (1898, p. 423-432) concluded that although one-half of the school districts practiced double promotion the general attitude of the superintendents was one of caution and concern lest "....good pupils be advanced beyond their depth..." (p. 427).

Progress with respect to individualizing instruction was characterized by modifications within the structure of the class or graded system because of the conservative attitude among educators toward school reorganization plans. The "Double-Track Plan", the "Cambridge Plan", the "Odebolt Plan", the "Le Mars Plan", the "Santa Barbara Concentric Plan", the "Group System", the "Large School Plan", the "Constant Group System", the "Shifting Group System", the "Newton Plan", and the "Double Tillage Plan" were all examples of either grouping, curriculum enrichment, or flexible promotion policies, which much like their nineteenth century counterparts, had little effect on the reorganization of the schools or the breaking down of the "lock-step" graded system (Henry, 1920, p. 12-18).

It was not until 1913 that significant inroads were made regarding a complete shift from the graded system to plans providing "....individual progress in the mastery of the common essentials" (Washburn, 1925a, p. 58). The "Burk Plan of Individual Instruction", developed at the San Francisco State Teachers College was the forerunner of a flurry of activity in the second and third decades of the twentieth century concerning school reorganization for individualizing instruction. The essence of the "Burk Plan" has been summarized by Ward (1925):

> "Each of the 700 children enrolled [kindergarten through eighth grade] was given a copy of the course of study for each subject on his program of studies. Provision was made for testing and promoting pupils as soon as the work outlined for any grade in any subject was completed. Class recitations were abandoned. No daily assignment was given in any subject" (p. 60).

Recognizing that his plan was experimental in nature and had not been put into practice in the public school setting, Burk anticipated that the "Individual Plan....could be applicable to the public school only when the administrative problems were worked out in a public school system" (Ward, 1925, p. 61). Consequently, two of Burk's colleagues, Carleton Washburn and Willard Beatty, initiated what became known as the "Winnetka Plan" in Winnetka, Illinois (Ward, 1925, p. 61). Based on Burk's thinking, the "Winnetka Plan" divided the curriculum into two parts; one dealing with the mastery of basic skills and the second providing for self-expression and group contributions (Washburn, 1925b, p. 77-79). Under this system a child could take as much time to master a unit as was necessary, but it had to be mastered. There was no failing, nor was there a necessity for grade skipping (Washburn, 1925b, p. 80). Similar plans for reorganization of the schools to avoid the dangers of the lock-step in the graded system were adopted in public schools in Bronxville and Dunkirk, New York; Miami, Florida; Peru, Indiana; and Racine, Wisconsin (Washburn, 1925b, p. 78).

In 1925 the National Society for the Study of Education devoted Part Two of its yearbook to a discussion of adaptation to provide for individualization of instruction. In addition to the "Burk Plan" and the "Winnetka Plan" other plans were reviewed, the basic characteristics of which were to attempt to break down the traditional grade system. One significant example of these plans was the "Dalton Plan". A "sociological rather than a curricular experiment", the Dalton Plan did away with grade rooms and allowed each child to budget his own time according to his abilities to master a "job" (Parkhurst, 1925, p. 84). It was estimated that in 1921, there were 200 Dalton Plan schools in the

United States (Washburn, 1925c, p. 83).

Although flexible promotion, educational acceleration, or grade skipping were the predominant provisions for the education of both the mentally advanced and the slow learner in the first two decades of the twentieth century (Henry, 1920, p. 18), Tannenbaum (1958, p. 31) and Southerland (1925, p. 28) noted that school reorganization utilizing homogeneous grouping for enrichment of the educational experiences for the gifted child became the model practice in the 1920's. Tannenbaum (1958) notes that the influence of the Progressive Education movement and the "....maturing sciences of psychology and sociology [which] were shedding new lights on the laws of learning, personality development and the impact of the group upon the individual" were decisive factors in the shift in the 1920's from acceleration to enrichment through homogeneous grouping as the dominant educational provision for the mentally advanced pupil (p. 32).

Some notable plans for enrichment of educational experience for gifted children through homogeneous grouping had their beginnings in the early 1920's (Heck, 1953, p. 378). Typical of these provisions, which appeared to be feasible only in large centers of population (Keys, 1938, p. 149), are those in Cleveland (Major Work), New York (Special Progress Classes) and Pittsburgh (The Colfax Plan).

Several forces acted to influence the change in providing enriched educational experiences through grouping. The shift toward enrichment in the regular classroom, which occurred during the 1930's (Tannenbaum, 1958, p. 33), is seen to have been influenced by (1) the depression of the early 1930's, (2) the unrealistic extreme to which some educators carried the concepts and theories of progressive education (Cruickshank, 1958, p. 24-25) and (3) the notion of specialists in child study that ability grouping was impossible to effect because of vast differences between and within children of apparent intellectual similarity (Tannenbaum, 1958, p. 34). Witty, (1933) saw ability grouping in the public schools as failing in the 1930's because of problems in (1) pupil selection, (2) lack of development of differential curricula, (3) providing for systematic reclassification of entire school systems, (4) large enough student populations for feasibility, and (5) teacher recruitment and training (p. 343) Keys (1938) noted that the shift from enrichment through special grouping toward homogeneous grouping, sloganized as "Enrichment within the regular class", was "....a solution more talked about than practiced" (p. 148). He noted that the increased responsibilities for such a policy were "....too much to expect of already overworked staffs" (p. 148). Heck (1953, p. 378) asserted that when schools advocate teaching children of high intelligence in regular classes it may be a convenient way of ignoring the problem.

The development of programs providing individualized educational experiences for gifted children paralleled the development of provisions for educationally handicapped children. Concern for appropriate educational provisions for the mentally sub-normal and physically disabled child has also been seen as the outgrowth of the humanitarian principles of such people as Horace Mann, Samuel Gridley Howe, Dorothea Dix and Thomas Gallaudet (Cruickshank, 1958, p. 10-11). The introduction of the intelligence test of Alfred Binet by Goddard to this country had an impact on the development of identification and classification of deviant intellectual functioning in the 1920's (Cruickshank, 1958, p. 12).

Cruickshank (1958, p. 14-25) noted that special public school classes providing individualized instruction for educationally handicapped children had their beginnings in Providence, Rhode Island in 1896, and that by 1911, 220 such classes were to be found in the United States. Cruickshank traced an increase in public school special classes for atypical children from 1915 to 1930 with a decrease in the 30's and 40's and a rapid post World War II expansion in the number of classes. Cruickshank posited the decline as due to (1) the depression of the 30's, (2) adverse teacher and parental attitudes, (3) the lack of comprehension of the concepts of differential curricula, and (4) over-zealous progressive educators. He pointed out that the resurgence of interest in the late 40's and 50's was a result of parental pressure, community acceptance of disability, and research efforts.

Although recognizing the difficulties involved in adapting the schools to meet the individual needs of students, Kilpatrick expressed optimism in efforts to break down the rigid graded school system (Kilpatrick, 1925, p. 273-286). He saw promise in certain features of both the Dalton Plan and the Winnetka Plan (pp. 276-286) for providing individualization of instruction in the schools. One might have expected on the basis of increasing developments in provisions for individualizing instruction through school reorganization of the 1920's that today's schools would reflect this concern in terms of the prevailing mode of organization for instruction.

Educational Acceleration by Rapid Promotion:

Educational acceleration as an administrative provision for individualizing instruction within the graded system had its beginnings in the flexible promotion policies of Harris (1873) in the 1870's. Henry (1920, p. 17-18) noted that educational acceleration through grade skipping was the predominant mode of administrative provision for the mentally advanced child in the first two decades of the twentieth century. Whipple (1924, p. 15) observed that special promotion was a "fairly common feature of plans for handling gifted pupils during the years 1913-1923." Freeman (1924) claimed that "....most school systems have given up the attempt [at enrichment in homogeneous groups] and have resorted to acceleration." (p. 654). However, Southerland (1925, p. 28) stated "....extra promotion is not at present a very common occurrence." Otto (1935, pp. 150-152), who stated a preference for enrichment over acceleration, noted that educators in general were not opposed to acceleration of gifted pupils, though the percentage of accelerated pupils in the schools was small.

According to Pressey (1949) there was much interest in rapid school progress during the 20's. There was then a shift away from the practice of educational acceleration "....apparently based more on unfortunately extreme cases or poor methods than on careful comparative investigation" (p. 13). Pressey further noted that in the late 1940's "....professional opinion has swung to carefully guided acceleration because of research findings" (p. 13). Cutts and Moseley (1953) noted that educational acceleration was somewhat unpopular in the early 1950's. Bowman (1955) observed that acceleration was being practiced in a cautious way in the middle 1950's. The National Education Association (1960) survey showed that in the seventy-six percent of the school systems providing special learning experiences for the gifted through enrichment, special classes, and acceleration, "....acceleration was being used infrequently at each level" (p. 47).

Educational Acceleration by Early Entrance:

Early entrance to the elementary school was at issue as early as 1839 in Dartmouth, Massachusetts. By 1843 voters in Dartmouth tried to vote in a minimum entrance age in "....order to keep the schools from being turned into nurseries" (Cominsky, 1957, p. 24). It was in 1909 that the Dartmouth schools adopted a minimum chronological age of six for beginning "formal schooling" (Cominsky, 1957, p. 25).

The general acceptance of the age of six as being the appropriate age at which a child should enter school has persisted since the beginnings of compulsory school attendance laws in 1852, in spite of periodic trends to increase the minimum entrance age. Otto (1941) notes that it is not clear how the age of six came to be accepted but that "Perhaps the practice evolved because six-year-old children were mature enough to leave home and travel the necessary distance to school" (p. 431). Otto adds:

> "When objective measurement of mental ability and achievement became generally possible, it was generally discovered that the first grade curriculum was too difficult for nearly fifty percent of the six-year-old children. The full force of this discovery was not felt until about 1930" (1941, p. 431).

Morphett and Washburn (1931) in their study into the appropriate age for beginning formal instruction in reading, concluded that children could not profit materially from reading instruction until they had reached a mental age of six years, and preferably six years, six months (p. 502). The results of this study have been criticized as reflecting more the method of reading instruction than the basic ability of children (Worcester, 1956, p. 7); however, its immediate effect was "....not a modification of curriculum, but a change in admission practices" (Otto, 1941, p. 432). Otto, (1935, p. 9) noted "the alarming fact" that there were many children who were seven years or older when they first entered grade one, although all of the school systems reported in his study admitted children to the first grade at approximately six years of age (Otto, 1935, p. 7). In 1963 the National Education Association noted that the trend was to raise the minimum entrance age to first grade. However, eighty-six percent of the school systems surveyed had minimum entrance ages of less than six years (NEA, 1963, p. 77-78).

Early reports of systematic efforts to identify and admit children to first grade on criteria other than chronological age appeared in the late 1920's. Washburn and Raths (1928, pp. 185-189) reported concerning children admitted on the basis of an average of chronological age and mental age. Lincoln (1929, pp. 22-30) reported on school achievement of children entered early on the basis of mental age.

In 1932, Brookline, Massachusetts initiated an "elastic system of initial entrance to school" (Hobson, 1962, p. 19). One reason given for the initiation of this early entrance policy was the general lack of provisions for individual differences among children in school practice (Hobson, 1962, p. 20).

Miller (1962) reports that as early as 1925 Evanston, Illinois had been allowing early entrance to school for children whose parents requested the testing of their children for school readiness. This flexible admission procedure was made part of the school program in 1940 when mid-year enrollments were discontinued (p. 31).

Interest in providing optimal opportunity for bright children prompted the Minneapolis Public Schools to systematize early entrance procedures, which had existed prior to 1933. In 1935 they began including screening of children with the Stanford-Binet test along with principal referral (Holbrook, 1962, pp. 35-36).

Gradual increase in the minimum age requirements for school entry, educators' concern for meeting the educational needs of underage children who were quite mature socially, intellectually, and physically, and parental concern for their children resulted in a comprehensive testing program in Nebraska aimed at providing early school entrance for qualified children in 1949 (Hiskey, 1962, p. 43).

Increase in minimum age requirements for school entry was also a factor leading to the study of early entrance in New Haven, Connecticut in 1927 (Cutts and Moselley, 1957).

Birch (1954) reported on a systematic identification and early entrance program in the Pittsburgh, Pennsylvania schools in the early 1950's, the beginning of which went back many years.

The National Education Association reported that in 1958 one school district in five utilized a mental age criterion that permitted intellectually superior under-age children to gain early entrance to school (NEA, 1958).

Arguments For Educational Acceleration:

Educational acceleration, including both rapid promotion and early entrance to school, has had both detractors and supporters. Arguments for and against educational acceleration have been based on psychological, educational, and sociological theory as well as on philosophical position. Arguments concerning early entrance to school are similar to arguments concerning rapid promotion, and will be presented together under the general heading of educational acceleration. In addition, there are, however, certain arguments specific to early entrance which will be presented separately.

Time Saving. A little more than seventy-five years ago Charles Eliot, then President of Harvard University, called for a shortening of pre-college education, arguing that the way things were "....the average college graduate who fits himself well for any one of the learned professions, including teaching, can hardly begin to support himself before he is twenty-seven years old" (Eliot, 1898, pp. 151-152). Keys (1938) insisted that the time saved in elementary and high school through educational acceleration could be used to greater advantage in "....lengthening the period of collegiate and professional training without deferring unduly the age of marriage and self support" (p. 154). Passow (1958, p. 213) held that acceleration allowed for "early entry to the productive years." Reynolds concurs with this viewpoint, adding, "....by delaying advanced training we may be mortgaging the most creative period of life for formal education rather than freeing it for more creative enterprises" (Reynolds, 1962, p. 4). Worcester (1956) contended that if three percent of our school children could save one year each by educational acceleration "....our country would have gained for its use more than 1,000,000 years of its best brains in a single generation" (p. 34).

Money Saving. Passow (1958, p. 213), Worcester (1956, pp. 34-35), Pressey (1949, p. 133-137), and Keys (1938, p. 154) all note the savings in money through shortening the length of time spent in educational programs.

Educational Opportunity. Keys held "That to hold back a student of outstanding ability at tasks suited to the average individual of his age is to deny him the right to an education suited to his needs" (1938, p. 153). Passow (1958, p. 212) noted that children should not have to spend a prescribed amount of time in a grade for administrative expediency, but that they should be allowed to progress at their own rate of speed.

Academic Achievement. Harris cautioned against failure to provide flexible promotion and added, "It must be remembered that when bright scholars are kept back for dull ones, they acquire loose, careless habits of study...." (1900, p. 338). Keys notes that "To hold all pupils to the same rate of progress through the curriculum tends to dull the zest of the most highly endowed, to encourage habits of dawdling and boredom, and to deny them discipline of sustained and intensive effort...." (1938, p. 153). Lowell (1934, p. 245) insisted that there was a "normal" time for education, that eighteen was too old to start college, and a student who was "too old" was in danger of treating his studies lightly. Worcester (1956) pointed out the dangers of ".... promoting lazy and careless work habits among those who are educationally beyond their classmates...." by failing to provide for educational acceleration (p. 34)".

Barney (1962, p. 3) pointed out that lazy attitudes and poor work habits resulting from boredom may lead to subsequent underachievement.

Social-Emotional Adjustment. Keys (1938) argued that "....children of highly superior intelligence are likely to be more happily adjusted with companions somewhat older than themselves...." (p. 154). Worcester (1956, p. 34) took the position that gifted children who are held back with those of their own chronological age are more likely to develop behavior and personality problems.

Arguments Against Educational Acceleration:

Social-Emotional Adjustment. Keys (1938, p. 154) noted that opponents[1] of acceleration hold chronological age development to be the best index of adjustment and that subsequent social and emotional adjustment will far outweigh intellectual advantages. Dunlap (1958) stated that "....it may not be feasible to promote a bright child far enough and fast enough to achieve this purpose [academic challenge] without creating too great differences in social, emotional, and physical status between the accelerated pupil and his classmates" (p. 163). Henry (1920, p. 23) held that among the disadvantages of acceleration was the disturbance of social adjustment.

Opportunity for Leadership. Keys (1938, p. 134) and Passow (1958, p. 214) both pointed to the possibility of denying a child his opportunities for leadership by placing him with older pupils which opponents have proferred as a negative aspect of acceleration.

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[1] With few exceptions it is difficult to actually identify opponents of acceleration as particular individuals. More often, proponents of acceleration state the arguments of anonymous "opponents" in order to discuss or refute them.

Physical Maturity. Opponents of acceleration have argued that the accelerated child will not be able to participate in the extra-classroom activities of his classmates such as athletics and heterosexual socializing (Keys, 1938, p. 155).

Creative Achievement. Students who are pressured to maintain a rapid pace lack the time for reflective thinking which may curb creativity (Passow, 1958, p. 214).

Future Employment. Otto (1935) argued against acceleration stating "....that under the present industrial organization children cannot secure worthy gainful employment until they have reached certain levels of social and chronological maturity" (p. 152).

Lacunae in Learning. Worcester (1956) noted that "In some instances.... skipping a grade may entail the omission of important subject matter" (p. 33). Keys (1938) added, "....double promotion leaves serious lacunae in a pupil's information and skills, corresponding to the content of instruction in the particular grades missed" (p. 155).

Acceleration as a Make-Shift Provision. Rugg (1924) observed that rapid promotion was the school administrators' "....practical solution for a very knotty problem--that of providing individual and group activities for exceptional children" (p. 86). Rugg further insisted that grade skipping was based on the fallacious assumption that all pupils should study one curriculm. Henry (1920, p. 23) held acceleration to be objectionable because it offered nothing in the way of a constructive, positive approach to the problem of meeting individual needs in the schools. Passow (1958, p. 214) noted that opponents of acceleration argued that the boredom which was observed to accompany the holding of a bright child with his age peers could better be combated by teaching methods rather than administrative provisions.

Teacher Competencies. Southerland (1925) contended that one of the reasons why extra promotion was unpopular was the fact that "....many teachers fail to recognize the super bright child, owing to their habit of thinking of all children as average children" (p. 28). Henry (1920) cautioned that "....opportunity to skip a grade is likely to be the result of the mere chance of obtaining the interest of a teacher who has initiative and energy enough to follow the matter up" (p. 23).

Arguments for Early Entrance:

Worcester (1956, p. 28-29) described early entrance as the most favorable form of educational acceleration and listed six "Values of acceleration by early entrance":

> 1. Early entrance has the advantage of any form of acceleration in that it saves a year of the pupil's life. If there be no further acceleration, the child has the regular number of years of education with all the possibilities of enrichment and can still enter college and after that, post college training, at an early age. For very many of these bright children, the extra year will be spent in advanced education in order to prepare for the exceedingly complex tasks of the professions, technology, business and government.
>
> 2. The child will be placed from the beginning with those more nearly his mental and social equal and will, therefore, be less likely to develop habits of dawdling and laziness.
>
> 3. His education will be directed. In some cases, to be sure, the mentally ready child who has to sit and wait will have the advantage of enlightened home training. For many it will be haphazard.
>
> 4. The problem of skipping material in the curriculum is obviated.
>
> 5. Teachers are made more aware of the particular needs of bright children by recognizing them at the beginning of their school careers.

6. The school system as a whole becomes sensitive to the problems of the gifted.

Arguments Against Early Entrance:

Barney (1962, p. 3-7) listed ten "Commonly Advanced Disadvantages" of early entrance to school. These are summarized as follows:

1. Bright children who enter at the normal entrance age will perform at higher levels.
2. Early entered children will not be able to cope physically with those a year older than themselves.
3. There is a danger to children's eyesight by too early instruction.
4. Early entrance will result in social-emotional maladjustment.
5. Early entered children will experience difficulties as underage college students.
6. Difficulties may arise from earlier reaching of puberty by older classmates.
7. Earlier formal education cuts down on the joys of childhood.
8. Early entrance should not be permitted for boys as they are ready for school at a later age than are girls.
9. It is more important to provide for early entrance for under-privileged children.
10. Early entrance for mentally advanced children is undemocratic.

Rasmussen (1962, p. 208) argued that through early entrance, "The five-year-old is being robbed of time to participate in wide and varied experiences to which he never again will have an opportunity to return". Rasmussen also presumed that some price is paid by the teacher in expenditure of energy as well as by the public in taxes, and called these disadvantages of early entrance.

Research Evidence on Educational Acceleration:

What follows will summarize the research into the consequences of educational acceleration on the academic, personal, social and occupational development of the accelerated student.

Rapid Promotion and Grade Skipping:

In 1924 Alltucker studied 135 Berkley accelerants to determine if they were misfits in senior high school, concluding that acceleration is one of the school's best methods of meeting the needs of superior students.

Engle (1930-1935) compared the records of high school graduates to study the effects of acceleration because of teacher opposition to the practice. One group (N=46) had one to three double promotions in elementary school. Two other groups consisted of regular age graduates: (1) the remainder of the graduating class (N=110); and (2) students randomly selected from the graduating class (N=46) exclusive of accelerants. The accelerated group showed (1) superior high school academic records; (2) more college matriculation; (3) greater participation in school activities; and (4) superior initial vocational record. Upon being followed to college the accelerated students were found to belong to more social organizations.

Unzicker (1932) studied the effect of rapid progress in junior high school (grades 7-8) on ninth grade achievement. The study involved 30 to 130 incoming seventh graders selected for rapid progress classes on the basis of sixth grade marks, health, social development, personality traits, tests of general ability and scores on the Stanford Achievement Test. The ninth grade records of 30 rapid progress students were compared with those of 22 students with high achievement who had completed grades seven and eight in the normal period of time. Unzicker found no differences between the groups on achievement or physical development (p. 355).

Moore's 1933 report of 46 superior young high school graduates found them participating in more extra-curriculum activities and athletics, more self-confident and poised than matched graduates.

Sackett (1936) compared 25 accelerated pupils with a chance selected group of 25 children of normal grade progress. The experimental group skipped either grade four or five. The accelerated group was ten months younger than grade level peers in the comparison group. Sackett reported no significant differences in gain in either educational quotient or achievement quotient. The average teacher grade for the accelerated group dropped from B plus to C plus after double promotion. Teachers reported that the accelerated group was at least average in social maturity.

Klausmeier (1963) reported a two-year follow-up of students accelerated from second to fourth grade which included a five week preparatory summer session. The accelerated pupils equalled or surpassed non-accelerated pupils of average abilities and younger pupils of superior abilities on all measures of intellectual and psychomotor abilities and adjustment.

The achievement and social adjustment of 288 under-age high school graduates (122 boys, 160 girls) from Chicago, Kansas City, Wichita, East St. Louis and Evanston was reviewed by Wilkins (April, June, 1936) The accelerants ranged in CA from 15-5 to 16-6 upon high school graduation. The average student had skipped three-fourths of a grade. Most acceleration had occurred in elementary school with 39 of the group completing high school in less than three years. The mean mental age of the group was 18-1 (April, 1936, p. 269). Based on a study of their high school grades, rank in class and number of failures, Wilkins concluded that the accelerants did well academically in high school. In rank in class they were not always at the top, their average rank being 29th in 100 (April, 1936, p. 272).

The accelerants studied by Wilkins (June, 1936) showed high interest in the fine arts as well as in mathematics and science. Boys showed low interest in English. The accelerants tended to have higher vocational ambitions than that of the fathers' occupation. Preference was for playmates of equal or older age. The accelerants participated in a wide range of high school activities and were average or above in regard to participation in group activities outside of school (June, 1936, p. 453).

Herr (March, April, 1937) compared the scholastic achievement and personal-social adjustment of junior high school accelerants with their high school peers. The accelerants were selected for rapid progress classes in junior high school (completion of three years' study in two years) on the basis of (1) IQ of more than 125; (2) high achievement in elementary school; (3) high citizenship ratings; (4) no health defects; and (5) parental permission. The 97 students in each group (53 boys, 47 girls) were matched on intelligence, achievement, citizenship, and sex variables. Both groups contained children who had skipped grades in elementary school, with more in the comparison group (March, 1937, p. 186-188). Herr compared the groups for achievement on the following variables: (1) average grades, (2) decile rank at graduation, (3) subject load, (4) standardized history and English tests, (5) standardized tests in geometry and chemistry, (6) score on a test of general information, and (7) subject failure. The only significant differences in academic achievement found were on scores in tests of American history and general information, in favor of the rapid progress group (March, 1937, p. 194-195).

In regard to participation in extra-scholastic activities and social adjustment, Herr (April, 1937, p. 292) found no significant differences between the groups on the sum of points earned on a rating system for participation in activities. Comparison of scores on a self-rating scale of social attitude toward peers yielded no significant differences. There were no significant differences between the groups on measures of social acceptability by classmates and health-illness records. The accelerated group contained more subjects with introverted-neurotic personality traits. The controls were rated as having more dominant, less submissive personality characteristics. Herr concluded that "emotional status and adjustment" should be weighed heavily in the selection of accelerants (April, 1937, p. 298).

Justman (1953; March, 1954; November, 1954) studied the effect of educational acceleration through rapid progress in junior high school on the academic and personal-social adjustment of gifted students. Ninety-five incoming junior high school students, scheduled for rapid progress classes, were matched with an equal number of non-accelerants on school attended, grade, sex, CA, IQ, and MA. The mean CA of both groups was 10-11. Justman (November, 1953) reported no differences between the groups in regard to personal-social adjustment in junior high school. Justman (March, 1954) found the accelerants to have scored significantly higher in mathematics, science, and social studies. In four New York high schools with large enrollments of gifted students, Justman (November, 1954) compared the school records of 176 accelerants with a like number of non-accelerants. The educational accelerants were twelve months younger than the comparison group, matched on IQ. Justman found no significant differences in the academic achievement of the two groups.

Keys (1938) and Pressey (1949) have presented extensive reviews of research into the consequences of educational acceleration in college.

Summarizing fourteen studies concerning early entrance age and adjustment in college, the earliest dating back to 1909, Keys (1938, p. 159-164) concluded that:

> "Even when matched against older students of equally superior intelligence and high school achievement, the younger entrants prove at no disadvantage. However, in regard to the bearing of early entrance upon students' own personality and health, their social adjustments and ability to share fully in extra-classroom activities, conclusions are conflicting" (p. 164).

Pressey (1949) reviewed studies concerning "Wartime Acceleration" (p. 19-25). These studies dealt mainly with early college entrance and shortening the overall time spent through college by the lengthening of the school year. Pressey concluded that the lengthened school year, which was the primary means of wartime acceleration was "....generally condemned as exhausting for faculties and too intensive and narrowing for students" (p. 26-27). Pressey further noted that in 1949 efforts at accelerated college progress were at a standstill. He proposed a reappraisal of the methods of acceleration and suggested that three basic concepts were being neglected by opponents of acceleration: (1) "....the concept of maturity as a point in development, like puberty, of major developmental change", (2) "....the concept of the prime as the period of peak total biological potentialities", and (3) "....the concept of individual differences" (p. 37). His concern over these neglected concepts led to a study of the college and after-college success of students at the Ohio State University. He also presented empirical data concerning the relationship between age of school completion and the age of first notable accomplishment of notable Americans of both the nineteenth and twentieth centuries. His findings in the later study indicated that the earlier group of notable Americans made their first significant contributions in literature, art, science, politics, and education at an age two years younger than the twentieth century group. He concluded that "There does seem to be suggested here the possibility that extensions of education were tending to delay productivity" (p. 70).

Pressey summarized the studies concerning students at the Ohio State University as follows:

> "It was found that the students entering young are more likely to graduate than those entering older; students graduating young show better academic records than graduates at average age, and distinctly better than those yet older; and when differences in ability were allowed for, the superiority of the young in both respects still remained. Furthermore, young students participate about as much in campus activities as students of average age, but older students participate less. Finally, students in accelerated programs are more likely to graduate than those progressing at the regular rate" (Pressey, 1949, p. 73-74).

Pressey (1949) further "....attempted to find out how they [the students] reacted to and evaluated accelerated programs, and what type of person the accelerated student was" (p. 113). He found that men students in engineering felt the lengthened school year to be "burdensome and too boring". Women students in undergraduate programs exhibited little complaint of acceleration. Deviations from the characteristic "four year summer vacation calendar" were felt to be "....difficult, even though entirely possible so far as abilities and the achievement of desired outcomes were concerned. For many superior individuals, acceleration seems only a recognition of advanced status, and the regular program an educational slowdown" (p. 113).

Keys (1938) studied the effects of acceleration at the college and high school level at the University of California and in the Oakland, California Public Schools. In the college study, Keys compared the scholastic records, personal-social adjustment and later careers of 196 accelerants with 139 non-accelerants who entered the University of California between 1922 and 1930. In regard to academic progress the accelerant "....was highly superior to the average student" (p. 261). Keys saw social adjustment as the crucial issue in his study, "....for it is about this problem that the opposition to acceleration centers" (p. 263). His college study showed the younger students "....either held their own or markedly excelled, both in percentage participating and in distinctions won", in the various types of college activities. Keys' results indicated that the accelerant might experience problems with personal and social adjustment. A greater percentage of the accelerants "....regarded their mental health and emotional adjustments as unsatisfactory", with seventeen percent of the accelerants expressing this view (p. 262), though whether the difference in percentages is significant was not indicated.

Terman and Oden (1947) studied the effect of school acceleration among 1,500 gifted subjects with IQ's ranging from 135 to 200 and a mean of 152. On the basis of age at high school graduation the subjects were grouped for comparison in order to study the effects of acceleration on their academic and vocational success, as well as personal-social adjustment. The experimental group (N=394) had a mean age at high school graduation of 15.9 years. The comparison group (N=998) had a mean graduating age of 17.3 years. The accelerants had skipped an average of one and one-half years. Statistically significant differences were found in favor of the accelerants in elementary school achievement. In high school the accelerants more often graduated having taken more recommended "units". One-eighth more of the accelerants graduated from college. The accelerants made higher grades and graduated more often with honors. One-fourth more of the accelerants completed one or more years of graduate study.

At the mean CA of 30, in 1940, the vocational progress of the groups was as follows:

1. One-sixth more of the accelerants were in professions.
2. One-third fewer of the accelerants were in the four lowest occupational levels.
3. Forty-two percent of the accelerants were in the top one-fifth of all men for vocational success.
4. Nineteen percent of the non-accelerants were in the top one-fifth of all men for vocational success.

Significant differences, in favor of the accelerated group, were found in regard to onset of age of puberty and physical health. No differences were found between the groups concerning "all around adjustment" in 1940 (Terman and Oden, 1947, pp. 264-281). The authors concluded that:

> "The question is, how much risk of social maladjustment one can afford to take in order to keep the gifted child at school tasks difficult enough to command his attention and respect. The data here reviewed indicates that the risk of maladjustment is less than commonly believed. Our case histories indicate the disadvantages so frequently mentioned by our subjects are usually temporary."

No empirical studies by opponents of educational acceleration were located. This finding is supported by Shannon (1957).

Early Entrance to School:

New Haven, Connecticut began an experiment in early admission to first grade for mentally advanced children in 1922. Cutts and Moseley (1957) described as satisfactory the early success of the eight early entrants.

Zirkle (1931) found underage bright children excelling more noticably as they progressed through the grades.

Fartington (1937) reported on the relationship between chronological age (CA) at first grade entrance, intelligence quotient (IQ) and achievement in grade two through six of 284 children. Fartington concluded that (1) many of the youngest children at first grade entrance (CA 5-0 to 5-5) did achieve well in school; (2) the largest percentage of those who could do better were found in the youngest group; (3) high mental age (MA) at school entrance was a better predictor of school success than was high IQ (p. 300). Fartington did not report on school entrance criteria. The youngest group in this study constituted ten percent of the total (284) studied.

Washburn and Raths (1928) reported on 36 children entered early to school in Winnetka, Illinois, on the basis of mental age. They showed that the early entrants did equally as well academically as the regular entrants. The early entrants were reported to be on a par socially with the older children as rated on a social rating scale.

Hobson (1948, 1962, 1963) has presented the results of twenty-three years of operation of a program designed to allow the early entrance to kindergarten of children carefully selected on the basis of physical and psychological test. These studies compared the scholastic and personal-social adjustment of early entrants with that of all other classmates. Hobson (1962) reported that:

> 1. A significantly high positive relationship existed between mental age at entrance and both teachers' marks and achievement test results through grade four.
>
> 2. Average marks and achievement test results of the under-age admitee group were found to be significantly higher than those of the other children in every grade every year except kindergarten (1962, p. 23).

In one study, Hobson (1948) compared the results of ten years of school progress of children admitted early in the years 1934-35 with all other children entering in those years. The under-age children admitted by test (N=96 in 1933, N=114 in 1934) showed superior academic achievement, and this superiority increased as they progressed through the eight years of elementary school. The results also showed that under-age children within six months of the minimum age requirements for school admission were the most successful, and that some of the under-age children were as much as one year younger than grade peers. The early entrants as a group had fewer academic difficulties and were less often referred as emotional problems (p. 320).

In 1963 Hobson presented the end results of a ten year study of high school graduates who had entered kindergarten early. Five-hundred and fifty early entrants were compared with their 3,891 classmates on high school scholastic performance, activity participation and relative success in college admission. The results of this study are as follows:

1. Academic superiority of the early entrants increased somewhat through high school.
2. Significantly more early entrants graduated with honors.
3. Significantly more early entrants were admitted to a scholastic honorary fraternity.
4. Significantly larger percentages of early entrants entered colleges of superior standing.

School districts in Nebraska have been admitting children to kindergarten earlier than the chronological age minimum since 1949, on the basis of intellectual, social, emotional and physical maturity (Dickey, 1962). A mental age of at least 5-3 is required for kindergarten admission. Smith (1951), Henderson (1953), Mueller (1955), and Stabe (1960) have studied the effects of early entrance to school on subsequent academic achievement and personal-social adjustment of the accelerated pupils.

Smith (1951) compared 175 early entrants to Nebraska schools with an equal number of randomly selected regular entrants on (1) teacher grades, (2) scores on standardized achievement tests, (3) sociometric measures and (4) teacher ratings of social and emotional adjustment. The younger group received higher marks through the fourth grade. There were no differences in marks in grades five and six. Reading readiness and reading scores for the younger group were equal to or better than those of the older group. The younger group scored higher on a sociometric measurement. There was no consistent superiority for either group on teacher ratings of emotional and social adjustment.

Monderer (1953) traced through five grades the academic progress and social adjustment of children admitted early to school in Fairbury, Nebraska. Comparing 138 early entrants with 468 regular entrants he found, (1) no sex differences in academic achievement at any grade level, (2) children eight months younger, matched on MA with an older group, scored as well as the older group, (3) comparing children in the same school, significant differences on teachers' ratings as well as standard test scores favored the younger group, and (4) on teachers' ratings of social adjustment, significant differences favored the early entrants, with greater differences in grades four and five. There were no sex differences between early entrants and regular entrants on social adjustment ratings.

Mueller (1955) studied the academic achievement of 4,275 children from urban and rural Nebraska. Three-hundred and sixteen children were early entrants (CA 4-8 to 4-10); 62 children were examined for early entrance but failed (CA 5-8 to 5-10); 3,415 entered school on the basis of CA (CA 5-10); 482 children were eligible but did not take a pre-kindergarten test and entered at normal entrance age (CA 5-8 to 5-10). Teachers in the first five grades were asked to rate all of their children as to academic achievement. Mueller found the early entrants rated above all others on academic achievement. He found those who failed the pre-kindergarten test to not be significantly different than regular students. Those students who were eligible but did not take the early entrance exam were rated above regularly entering students.

Mueller also reported on teacher ratings of (1) health, (2) coordination, (3) acceptance by other children, (4) leadership, (5) attitude toward school, and (6) emotional adjustment. He found that for the first five grades the younger, brighter group were rated significantly higher on all traits than those of regular entrance age and those who failed the pre-school test. His results showed no significant differences in height and weight after grades four and five.

Stabe (1960) examined the degree of academic progress within a group of 473 early entrants to Nebraska schools. Utilizing third grade achievement test scores he showed that entering children with preschool MA's of 5-8 will, on the average, exceed the national mean on achievement test scores by one-half year in grade equivalent. Children with preschool MA's of 6-7 would exceed the national mean by over a year.

Birch (1954) reported on the school adjustment of 43 mentally advanced children who were admitted to first grade at CA 5-4 to 5-4 1/2. Summarizing a three year follow-up, Birch reported that the early entrants made satisfactory academic adjustment. He also found the majority of the 43 early entrants in the Pittsburgh study to show satisfactory or better social, emotional and physical development in the first three grades.

In Ridgefield, Connecticut, Voight (1962) compared 79 early entrance children in kindergarten through grade four with an equal number of sex-matched regular entrant grade peers, with mental age and socio-economic status controlled. Early entrants achieved as well or better than older classmates on achievement tests and teacher marks. There were no differences on physical, social and emotional characteristics, according to teachers, except that teachers felt the early entrants had more friends in their classrooms than regular entrants while, in third and fourth grade, peer ratings showed less acceptance by others of early entrants. Parents (76%) strongly favored the program while teachers generally had more mixed reactions.

Miller (1963) reported on the early school progress of children entered early to school in Evanston, Illinois. Children entered early to kindergarten on the basis of physical, emotional and social readiness as well as intellectual ability were compared with older grade level peers on the Metropolitan Reading Readiness Test. Early entered children compared with children one year older; 80 per cent of the young group and 79 per cent of the older group scored average or superior on reading readiness scores. Among the top 12 1/2 per cent were 20 per cent of the younger and 20 per cent of the older group. None of the youngest group and seven per cent of the oldest group were among the lowest 12 1/2 per cent. In fifth grade six per cent of the accelerants and 25 per cent of the older pupils scored below the first quartile on achievement tests; 40 per cent of the youngest group was above the third quartile. Miller also reported that when comparing 23 accelerants and 157 non-accelerants on the STEP Achievement Test in the eight grade there were no significant differences between the groups. Miller found no significant differences between eighth grade accelerants (N=23) and non-accelerants (N=157) on teacher rating scales and peer ratings.

Five studies were located, the results of which were negative to the practice of early entrance to school, but three did not involve selecting students of high mental ability. King (1955) and Carter (1956) studied the effect of early entrance on children in the normal range of intelligence. Neither study considered mental age as a factor in the investigation of early school progress. Weiss (1962) studied early entrants selected on the basis of emotional and social maturity.

The purpose of King's (1955) study was to compare the achievement and personal-social adjustment of children entering first grade before six years of age with those entering after six. The youngest group (N=54) had a mean CA of 5-10. The oldest group averaged 6-7 in CA. Both groups contained only children in the 90-110 IQ range. The results of the study favored the oldest group. The oldest group had significantly higher achievement scores. There were fewer grade retentions through six grades and a better attendance record for the older group. More speech problems, a greater percentage of emotional problems, and more "undesirable growth characteristics" were reported for the younger group.

Carter proposed to clarify the relationship between CA, maturity and curriculum. One hundred children, 50 less than CA 6 and 50 more than CA 6, were studied from grade two through six. The children were matched on sex and IQ. No mean or range was given for IQ. Carter concluded that "...eighty-seven per cent of underage children do not equal the scholastic achievement of normal age children."

Weiss (1962) studied the first grade achievement, personality, and social status of 35 early entrants compared with 161 regular entrants. The children were matched on IQ and personality factors, and compared in high and low IQ groups. The California Test of Personality, a sociometric test, and teacher rating scale of achievement were used to effect comparisons. On all measures the early entrants scored lower than older children of the same IQ. The early entrants also scored lower than those of average IQ who were eight to twelve months older.

Mawhinney (1964) reported on a school district which abandoned the practice of early admission after a survey of the results which suggested negative affects.

The studies of acceleration for mentally advanced students leave no question as to the desirability of the outcomes in general. There may remain some equivocation on the consequences with regard to personal adjustment. It would certainly be helpful if study were designed and conducted to supply definitive information on the outcomes of acceleration with respect to personal adjustment, since no substantial investigation has focussed primarily upon that matter. However, the preponderance of the limited information available suggests that concerns on that point tend to have been exaggerated to date.

Looking specifically at studies of the results of early admission to schools for mentally advnaced children it must be concluded that there is much to be said for the practice and little to be said against it.

All research reports considered, the practice of early admission to school for mentally advanced children has much to recommend it in terms of the depth and the variety of empirical evidence which supports it.

Summary:

The review of the literature included the historical development, the arguments and the research evidence on acceleration in general and on early admission to school in particular. The preponderance of weight from each direction is judged to support the importance of flexible admission to and flexible progression through school as a way of accommodating to individual differences in learners when they are confronted with a relatively static curriculum. Even in instances in which the curriculum may be made flexible, it is probable that flexible admission and progression will have important parts to play.

CONDUCT OF THE WARREN PROJECT

The demonstration began in September, 1961. Scheduled for 32 months, it was extended to December 31, 1965 to allow the collection of data on early entrants completing three years of schooling. This section of the report deals with the selection of the site for the demonstration, the procedure of selection of early entrants, community preparation for the demonstration, relationships among the local school district, the State Department of Education and the University, the kinds of data collected and the methods used in collecting it, and the procedures for demonstration, research and dissemination.

Selection of the Site

At the time the proposal for the demonstration was submitted several locations in Western Pennsylvania and Eastern Ohio were possible sites. Tentative arrangements had been made to the point of assurance from school officials that consideration would be given to taking part if formally invited. A number of criteria were considered in the final choice, and they are listed below.

1. The school district should have sufficient public kindergartens to accommodate all its children.
2. Kindergartens should be an established part of the school system, and the district should plan to continue them.
3. The size of the district and other indications such as socio-economic level should assure the presence of twelve to twenty-five children who might qualify for early admission annually.
4. The district should consistently provide well-qualified teachers and adequately equipped physical plant and instructional facilities and materials.
5. The Board of Education and the administration should be willing to commit the district to the demonstration, within reasonable limits, and willing to consider continuing early admission as

school district policy after the close of the formal demonstration.

6. The district should be willing to allow its operations to be held up to public view on a national scale.

7. The recent history of the school system should be free of involvement in major research or demonstration projects which might have produced either unusual readiness for or surfeit with such projects.

8. The district should be near enough to the University of Pittsburgh to allow ready accessibility.

Several school districts in addition to Warren, Pennsylvania could have met the requirements. The choice of Warren was influenced by the fact that the elementary education supervisor responsible for programs for mentally advanced children in Warren was a graduate student of the principal investigator and, being ready to return to his duties in Warren, expressed interest in the project. He opened discussions about it with the superintendent of schools. The principal investigator then reviewed the project with the superintendent and his associates. The superintendent, after talking with the president of the Board of Education, invited the principal investigator to present the project to the Board at a regular meeting. The Board acted by resolution to participate in the demonstration and authorized the Superintendent of Schools to proceed administratively.

Warren is a borough of 14,505 population in the northwest corner of Pennsyvlania (U.S. Bureau of the Census, 1961). It is approximately 150 miles north of Pittsburgh and 65 miles east of Erie. Settled largely by Scandinavians in the early 1800's, the population is "....homogeneous in ethnic background and cultural outlooks" (Warren Area School System, 1965). Warren is socio-economically somewhat above average; the median family income being $6,057 (U.S. Bureau of the Census, 1961b). There is a broad range of socio-economic levels.

The Warren Area School System (1963) reports more than 200 professional employees and a school enrollment of 6,333. Annual kindergarten enrollment prior to the project had numbered approximately 300.

> "The seven elementary schools of Warren Borough have a total enrollment of more than 1,800, the junior high school nearly 1600, and the senior high school over 1300. The Warren Secondary Schools serve an area having a population of 25,000 people" (Warren Area School System, 1963, p. 1).

The city is long-established, is a county seat, and is in the site of diversified businesses and industries. The latter includes oil, concrete casting, steel and electrical equipment, fabrication and manufacturing, and one of the nation's large mail-order clothing houses.

A map of Warren showing school locations is included as Appendix A.

Selection of Early Entrants

It was determined that all children in the community would be studied for possible early admission to kindergarten, within the limit of one full year of acceleration. The age standard for regular admission required a child to be fully four years and nine months of age by September 1 of the year of kindergarten entry. Thus, regular entrants to kindergarten on any September 1 would range in age from four years and nine months to five years and eight months. Children selected for early admission might range in age from three years and nine months to four years and eight months as of September 1 of the year of entry.

In order to conduct the necessary examinations on potential early entrants in ample time to make determinations about recommendations, the children were studied during the school year before the one to which they might be admitted early. Therefore, the evaluations were made on all children in the community when they were between age two years and nine months and three years and eight months. (Actually, all had reached at least age 3-0 before being examined.)

The procedure for selection of early entrants included a series of steps. The forms and directions used are grouped in Appendix B.

1. The school census was used by the home and school visitor (school social worker) to make a card index of all children in the community who would be between the ages of three years and nine months and four years and eight months by the following September 1.

2. Letters were sent by the Superintendent of Schools to the parents of the children. The letters described the program and encouraged the parents to participate. A response card was enclosed for return, the card containing up-to-date information on the child and times when appointments might be convenient.

3. Newspaper and radio announcements were released to give general information about the program and to inform parents who might have moved into the community since the census was taken. All responses to the Superintendent's letters and all inquiries were directed to the home and school visitor, who coordinated the information on the location and participation of families and children.

4. Two psychologists, each employed part-time by the school district, established schedules for appointments for day-time and evening periods during the week and on Saturdays. The home and school visitor turned over to the psychologists lists of children and relevant data from the families. The psychologists then telephoned the parents and made their appointments directly. In this connection, the following items need to be noted.

    a. Where there was no response or reluctance on the part of the parents to have their children examined (and that was the case occasionally) the home and school visitor telephoned or visited to urge cooperation.

    b. Where appointments were made but not kept, every effort was made to schedule other appointments by the home and school visitor and by the psychologists.

    c. The psychologists shared information, passing appointments back and forth in order to make it convenient for the families, and sometimes doing two evaluations when one interview and examination was inconclusive.

5. The testing and evaluation by the psychologists included height and weight measures, administration of the Vineland Social

Maturity Scale, the Stanford-Binet Tests of Intelligence (1960), the Goodenough Draw-a-Man Test, a rating of the child's social and emotional behavior on a rating scale developed for the purpose (Appendix C), and review of a developmental history supplied by the parents in an interview (Appendix D). At the end of the examining period, the psychologist made a determination as to whether the child should be passed on to the next step in the screening procedure or whether to stop at that point. In either case, an oral interpretation of the findings was given to the parents at the conclusion of the examination.

6. The multiple criteria used by the psychologist employed certain major bench-marks: Intelligence test quotients 130 or higher; social maturity approximately one year above standard; sound and well-developed personality as judged subjectively; and physical characteristics not likely to limit the child. The psychologist prepared a written report of his work for inclusion in the school record of each child.

7. In cases to be passed on to the next step in screening, the psychologist informed the parents that additional consideration would be given to the child, based on a visit to the kindergarten in his neighborhood school, with the arrangements again to be made through the home and school visitor.

8. Upon receipt of information about a candidate, the kindergarten teacher telephoned the family and arranged for the child to visit. Typically, the mother brought the child to school for an hour or two, and the kindergarten teacher observed the youngster as a visitor during a regular kindergarten session. The kindergarten teacher evaluated the child in terms of whether he reacted in any way substantially outside the range of behaviors ordinarily associated with a typical child of standard admission age on his first day in kindergarten. The items on the school district's kindergarten report cards were used as points of reference with respect to behavior to be particularly noted. Appendices E and F contain, respectively, lists of the child behavior Warren kindergarten teachers considered desirable indices for early admission and considerations suggested by the psychologists for assistance to the kindergarten teachers when observing a candidate for early admission and discussing the child with the parent. The parent, upon returning for the child, was advised that a recommendation would be made by letter after the matter had been reviewed by the school personnel concerned.

9. In all of the above steps, the following two considerations were observed to the greatest extent possible:

    a. There was a full year of age-range in the children being considered for early entrance. To accommodate to that, the evaluation of the children was delayed as much as possible, with most youngsters being examined after the fall and early winter months had passed. Also, the older children were scheduled for examination before the younger children, allowing the younger ones the opportunity to profit from several additional months of growth and development by the spring and early summer. Practical considerations, of course, did not permit these arrangements in all cases.

b. Every effort was made to supply full interpretations to parents, including answering their questions. Emphasis was given to the idea that the project was a demonstration firmly grounded on research and experience. Parents were advised that their child, if admitted early, would attend the local kindergarten with local children and that no unusual demands would be made on the youngster.

10. Following the kindergarten visit by the candidate, the question of what to recommend was reviewed by a committee. In the first year of the demonstration the review included a physical meeting of the kindergarten teacher, the elementary education supervisor, the home and school visitor, a member of the demonstration staff from the University and, sometimes, the psychologist and the local school principal. Subsequently, the committee was reduced to the teacher, the home and school visitor and the elementary supervisor, with others being on call. The conclusions of the committee were transmitted to the parents by a letter from the Superintendent (Appendix B).

11. In all instances the final decision as to whether the recommended child was actually entered early was made by the parents. They were given full opportunity to discuss the matter with appropriate school officials, but the parents made the decision.

The procedure outlined above was used in the majority of instances. Sometimes, of course, a family with an eligible child would move into the community during the summer when school was not in session. In those cases the kindergarten teacher's appraisal could not be included in the assessment.

Community Participation

In cooperation with the school officials of Warren a systematic information campaign was launched. Meetings were arranged with individuals and groups to assure to the greatest extent possible that full and accurate information about the project would reach all quarters of the community.

In each case certain points were made about the enterprise. These were:

1. The Board of Education and school officials were convinced that early admission to school for mentally advanced children was a desirable practice, based on research and experience.
2. Every child in the community would be considered for early admission and for those found eligible, parents would have the final decision.
3. The demonstration had the full support of the University of Pittsburgh, the U.S. Office of Education and the Pennsylvania Department of Public Instruction.
4. No substantial extraordinary expense would accrue to the community on account of the costs of the project.
5. The project would run over at least a two year period, and probably longer.
6. As an important by-product, all children entering school during the period of the project would be benefited by the information made available to teachers, whether the children were early entrants or not.

Groups and individuals whose interest and cooperation were sought included the following:

Kindergarten Teachers Association
Warren County Medical Society
The two local daily newspapers
Local service clubs
Parent-Teacher Associations
Warren County Schools Office
The local radio station
City officials

Early in the course of the project the Pennsylvania State Department of Public Instruction extended its cooperation to include participation in support of the costs. This was done through standard channels of support for special education on the premise that the early admission program constituted an approved special education program for mentally advanced children. Another factor which allowed the state to participate financially was the early identification of other educationally exceptional children which resulted when all children were studied prior to school entrance.

Collection of Data on Children

The responsibility for data collection was the project staff's. Since the entire operation was to be conducted within the existing structure of the Warren School Systems, only those data which would not normally be a part of a local school program of early admission were collected directly by project staff members. Data which were systematically collected and recorded by the project staff are as follows:

Identifying information
Reading Readiness Ratings
Achievement Test Scores
Social Maturity
Sociometric Scores
Report of Psychologist
Stanford-Binet Intelligence Scores
Good enough Draw-a-Man Scores
Height and weight
Developmental History
School Marks
Emotional Development Rating

Facilities and Equipment

The Warren Schools allocated office and storage space for the project staff. The space was adequately furnished to allow for record-keeping, telephoning, conferences and other routine activities required.

The psychologists were supplied with the necessary testing equipment and materials. Dictaphone equipment was loaned to the psychologists to facilitate their work.

Coordination with School Program

The demonstration procedure was to be adjusted to fit into the prevailing policies and practices of the school system in which it was conducted. The superintendent supplied the demonstrators with copies of the printed policies and procedures which were in effect. These were reviewed periodically as guidelines. Actually, there were no instances in which it proved difficult to coordinate project activities with standard procedures in Warren. Group testing done for the purposes of the project was planned by the local committee which plans all of the school system's testing, and was built into the regular testing schedule. Contacts with parents were mediated through the school officials (principals, home-and-school visitor) who would ordinarily make such contacts. Reports on children were prepared so as to be included in the cumulative records regularly in use. Payment of local project staff was established on the scale and in the manner used in the Warren Schools. These activities serve as examples of the kinds of items which called for coordination.

The accommodation of the demonstration to local school conditions was facilitated by staff conferences. The demonstrators met frequently with the superintendent and other school officials to discuss progress and problems. The project staff members were made welcome in the meetings of the Superintendent's staff, in teachers' meeting by grades and in meetings of the principals.

Special Considerations Effecting the Project

While the project was under way a number of changes occurred in the Warren Schools and in Warren's relationships to local, regional and state governments. The changes were not caused by the demonstration but may have had significant effects upon it. Whether such effects did occur and the nature of the presumed effects are speculative questions.

Except for the superintendency, all of the key central office administrative and supervisory positions had personnel changes during the period of the demonstration. Three of the six kindergarten teaching positions changed.

During the demonstration, and coming to focus in its last two years, new state laws required the merger of the Warren School System with a number of others into a larger unit made up of Warren County. The Warren Board of Education opposed the merger, recommending instead a less inclusive combination which would result in two school districts instead of one in the county. Their wishes did not prevail. Administrators, supervisors and teachers are assured positions in the newly formed school system. The decisions as to who will have which positions will be made by a new board of education and a school superintendent as yet unnamed.

The judgment of the project staff members made on the scene is that the changes have had generally limiting effects. This is to say that the demonstration proceeded in spite of some formidable local problems which really had nothing to do with it.

The principal consequence of the personnel turnover was the need to orient new staff members. The results of the impending school merger may have been more subtle. It is a tribute to the stability of the staff members and to the confidence engendered over the years by the superintendent of schools and the board of education that no panic reactions appeared. There was, however, some understandable preoccupation over whether the policies and procedures of the new school system would include kindergartens, foreign language in the elementary schools, home and school visitor services, and other parts of what had become the standard program in Warren, but not in many other districts which would be included in the merger. Thus, early school admission had to compete with already well-established parts of the school program in which a substantial number of local interests were vested.

That the demonstration was successful in the face of the special conditions noted above is, perhaps, further testimony to the durability of early admission for mentally advanced children when it is fully understood by a community in the context of educationally significant individual differences among all children.

RESULTS OF THE WARREN PROJECT

Job Modifications and Associated Costs

In an article which appeared after this demonstration started, Mawhinney (1964) claimed that early entrance programs are too expensive to justify their benefits, though the cost data he presented did not allow firm conclusions or generalizations. The Warren Demonstration was undertaken in part because of a paucity of information concerning the impact of early entrance programs on the activities of school personnel as well as the costs of such programs. School administrators and school boards, working with the limited school dollar, must certainly be concerned with the economic feasibility of any program. School administrators and supervisory personnel as well as those involved with special pupil services can be expected to welcome information concerning the extent to which jobs may be modified as the result of the adoption of a systematic early entrance program.

The purpose of this section is to present evidence concerning the effect of the impact of a change in school admission policies on the Warren, Pennsylvania school district as indicated by (1) modifications in the activities of school personnel, and (2) the costs associated with the modifications.

The expression, "modifications in the activity of school personnel," is intended to include:

1. Changes in the use of time;
2. Changes in approach or attitude toward job;
3. Additional professional school services.

The expression, "costs associated with these changes," is to include:

1. Cost of additional professional services;
2. Costs of material and supplies necessary as a result of the early entrance program.

This investigation included the above modification and cost aspects of the Warren early entrance program.

Personnel:

The Warren school personnel most directly involved in the early entrance project were those with administrative and supervisory responsibilities and those concerned with special services to pupils. In this case, kindergarten teachers had certain administrative responsibilities concerning identification and intake of early entrants. The personnel included were:

1. The Superintendent of Schools
2. The Assistant Superintendent of Schools
3. The Director of Elementary Education
4. The Home and School Visitor
5. Elementary School Principals (N=7)
6. Kindergarten Teachers (N=6)
7. School Psychologists

Procedure:

An interview schedule (Appendix B [A through G]) was constructed for the investigation. An interview was arranged with each of the subjects through the office of the Superintendent of Schools. Each interview was conducted in private. Two members of the Future Teachers of America were provided to release the kindergarten teachers for periods of time to insure privacy in the interview. Interview responses were transcribed and are presented here in summary and tabular form. The Warren School budget and demonstration project records were employed to yield data concerning costs associated with job modification.

Results:

Changes in use of time: Table One summarizes responses of all of the subjects to the question, "What additional time or changes in your use of your time directly associated with the early admission program were required by (a) conferences with the demonstration project staff and (b) with the administrative and supervisory staff?"

Table Two summarizes the responses of the Superintendent, Assistant Superintendent, Director of Elementary Education, and the Home and School Visitor to the question, "What additional time or changes in your use of your time directly associated with the early admission program were required by interviews or conferences with teachers and principals?"

The responses of all the subjects to the question, "What additional time or changes in your use of your time directly associated with the early admission program were required by interviews or conferences with (a) parents of candidates for early admission and (b) other members of the community?" are summarized in Table Three.

Table Four represents a summary of the amount of time reported by all subjects as spent in meetings with the committee on recommendation for early entrance to school.

The Superintendent and Assistant Superintendent have responsibility for,

(a) Personnel recruitment
(b) Preparing for School Board meetings
(c) Preparing school budget

TABLE 1

TIME SPENT IN CONFERENCE WITH (a) DEMONSTRATION PROJECT STAFF AND (b) ADMINISTRATIVE AND SUPERVISORY STAFF BY WARREN SCHOOL PERSONNEL RELATED TO EARLY ADMISSION

School Personnel	(a) With Demonstration Staff		(b) Administrative and Supervisory Staff	
	Formal	Informal	Formal	Informal
Superintendent of Schools	5-10 hours per year	undetermined	1.5 to 4.5 hours per year	undetermined; "open door" policy
Assistant Superintendent of Schools	4 hours per year	undetermined	I have delegated this responsibility	considerable; undetermined
Director of Elementary Education	10-15 hours per year	undetermined	10-15 hours per year	undetermined
Home and School Visitor	8 hours per year	undetermined	30 hours per year	undetermined
Elementary School Principals (aggregate)	range from zero to 3 hrs. per year	undetermined	range from zero to 6 hrs. per year	undetermined
Kindergarten Teachers (aggregate)	undetermined; dinner meetings	undetermined	range from 40 minutes to 6 hours per year	undetermined

TABLE 2

TIME SPENT IN INTERVIEW OR CONFERENCE WITH TEACHERS AND PRINCIPALS BY THE SUPERINTENDENT, ASSISTANT SUPERINTENDENT, DIRECTOR OF ELEMENTARY EDUCATION AND HOME AND SCHOOL VISITOR

School Personnel	Formal	Informal
Superintendent	once a month undetermined	considerable undetermined
Assistant Superintendent	considerable undetermined	very little undetermined
Director of Elementary Education	50 hours per year	undetermined
Home and School Visitor	14 hours per year	20 hours per year

TABLE 3

TIME SPENT IN INTERVIEW OR CONFERENCE WITH (a) PARENTS OF CANDIDATES FOR EARLY ADMISSION AND (b) OTHER MEMBERS OF THE COMMUNITY

School Personnel	(a) Parents of Candidates		(b) Members of Community	
	Formal	Informal	Formal	Informal
Superintendent	practically none; delegated responsibility	practically none; delegated responsibility	none	undetermined
Assistant Superintendent	none	none	none	often; undetermined
Director of Elementary Education	15 hours per year	undetermined	20-25 hrs. per year; speeches	considerable; undetermined
Home and School Visitor	10 hours per year	undetermined	not often; undetermined	5 hours per year
Elementary Principal (aggregate)	undetermined	range from zero to 10-15 minutes per year	range from zero to one hour per yr.	range from zero to 2-3 hrs. per year
Kindergarten Teachers (aggregate)	range from zero to 1.5 hours per year	range from zero to 1.5 hours per year	range from zero to 10 hours per yr. (speech)	undetermined; often

TABLE 4

TIME SPENT WITH COMMITTEE ON RECOMMENDATION FOR EARLY SCHOOL ENTRANCE

School Personnel	Time Spent in Recommendation Committee
Superintendent	Very little; I act as a consultant when questions arise
Assistant Superintendent	Infrequently; 1/2 hour per year on questionable children
Director of Elementary Education	3-4 hours per year
Home and School Visitor	10-15 hours per year; we meet as a body only when problems arise
Elementary Principals	none
Kindergarten Teachers	none

TABLE 5

TIME SPENT BY SUPERINTENDENT AND ASSISTANT SUPERINTENDENT IN (a) PERSONNEL RECRUITMENT, (b) PREPARING FOR SCHOOL BOARD MEETINGS, (c) PREPARING SCHOOL BUDGET, AND (d) RESEARCH OF SCHOOL LAW IN CONNECTION WITH EARLY ENTRANCE TO SCHOOL

Activity	Superintendent	Assistant Superintendent
Personnel Recruitment	3 hours per year; only for school psychologist	20-30 hours this year; for school psychologist
Preparing for School Board Meetings	15 minutes for two meetings. Consultant (Dr. Birch) did original presentation	none
Preparing School Budget	3.5 to 4.75 hours per year; necessary to submit budget to Special Education Section of Department of Public Instruction	undeterminable; part of the job
Research of School Law	none: no research necessary	none

It is also their responsibility that (d) the school district be operated properly within the limits of school law. Table Five summarized these activities (a, b, c, d) for the Superintendent and Assistant Superintendent.

Conferences with educators from outside the school system and the responsibility for preparation of publicity releases concerning the early entrance program were the responsibilities of the Superintendent, Assistant Superintendent, Director of Elementary Education and the Home and School Visitor. Table Six summarizes the amount of time spent by these subjects involved in these activities.

All of the subjects were queried concerning the amount of time spent with correspondence and the amount of clerical assistance that was required by their activities in connection with the early admissions program. Table Seven summarizes the results of these questions.

The early entrance program in Warren resulted in expanding the school achievement testing program to include first and second grade. Also, the results of the testing were duplicated and forwarded to the demonstration project office. Those school personnel responsible for the administration and supervision were queried concerning the additional time they spent as a result of this expanded testing program. Table Eight summarizes these responses.

The Director of Elementary Education and the Elementary Principals in Warren are responsible for the supervision of the teacher in the classroom. Their responses to the question, "What additional time or changes in your use of your time directly associated with the early admission program were required by classroom supervision?" are summarized in Table Nine.

The Home and School Visitor had additional responsibilities that were delegated to him in connection with the early entrance program. These have

TABLE 6

TIME SPENT WITH (a) EDUCATORS FROM OUTSIDE THE SCHOOL SYSTEM AND (b) THE PREPARATION OF PUBLICITY RELEASES CONCERNING THE EARLY ADMISSIONS PROGRAM BY SCHOOL PERSONNEL

School Personnel	(a) Outside Educators	(b) Publicity Releases
Superintendent	1.5 hours per year; generally presenting an overview of the program	a few minutes a year; usually proof reading
Assistant Superintendent	undeterminable; just brief contact	none
Director of Elementary Education	10-15 hours per year	3-15 hours per year includes TV and radio programs
Home and School Visitor	20 hours per year	none

TABLE 7

TIME SPENT WITH CORRESPONDENCE AND THE AMOUNT OF CLERICAL ASSISTANCE REQUIRED BY SCHOOL PERSONNEL AS A RESULT OF THE EARLY ENTRANCE PROGRAM

School Personnel	Correspondence	Clerical Assistance
Superintendent	2-4 hours per year	maybe two dozen letters a year
Assistant Superintendent	six letters a year	negligable
Director of Elementary Education	15 hours per year; letters of inquiry passes on by superintendent	
Home and School Visitor	14 hours per year; mailing and phoning parents of eligible children	10% of the time of one full time girl
Elementary Principals (aggregate)	none	range from none to minimal; undeterminable
Kindergarten Teachers (aggregate)	none	range from zero to one hour per year

TABLE 8

TIME SPENT IN ADMINISTRATION AND SUPERVISION OF ACHIEVEMENT TESTING PROGRAM BY SCHOOL PERSONNEL

School Personnel	Test Administration - Supervision	
Director of Elementary Education	3 hours per year; 1st and 2nd grade achievement testing	
Home and School Visitor	12 hours per year; 1st and 2nd grade achievement testing:	
	getting material to teachers	5
	forwarding results to project office	1
	answering procedural questions	3
	return and interpretation	3
	Total	12
Elementary Principals (aggregate	range from none to 3 hours per year	
Kindergarten Teachers	range from none to few minutes for recording	

TABLE 9

TIME SPENT BY DIRECTOR OF ELEMENTARY EDUCATION AND ELEMENTARY PRINCIPALS IN CLASSROOM SUPERVISION

Activity	Time Spent by Director of Elementary Education	Time Spent by Elementary Principals (aggregate)
Classroom Supervision	20-25 hours a year with instructional problems concerning early entrants	range from none to 20 hours per year in observation and consultation

TABLE 10

TIME SPENT BY THE HOME AND SCHOOL VISITOR IN (a) PRE-SCHOOL CENSUS, (b) SCHEDULING PSYCHOLOGICAL EXAMINATIONS, (c) DIRECT CONTACT WITH PSYCHOLOGISTS, AND (d) DIRECT CONTACT WITH THE CHILDREN

Activity	Time Spent by Home and School Visitor
Pre-School Census	4 hours per year; selection of children of appropriate age for psychological testing
Scheduling Psychological Examinations	4 hours per year
Direct Contact with the Psychologists	6 hours per year
Direct Contact with the Children	15 hours per year with early entrance

been presented in Table Ten along with the amount of additional time spent in each activity.

The adoption of the early entrance program added the following responsibilities for the Elementary Principals and the kindergarten teachers:

1. Kindergarten visitations of early entrance candidates
2. Recording observations of kindergarten visitations
3. Preparing recommendations concerning early entrance for the candidates
4. Study-review of psychological reports.

Table 11 summarizes their response to a query concerning the amount of time these activities required.

Changes in approach or attitude toward job:

In order to (a) determine additional job modifications not covered by direct interview questions, and (b) to determine in what ways the adoption of the early entrance program had altered their approach or attitude toward their jobs, each of the school personnel were asked, "In what other ways has your position been modified as a result of the early entrance program?" These responses have been summarized and are reported for each of the subjects in Table 12.

Additional professional services:

The major additional professional services required by the Warren Schools in order to conduct the early admissions program were those of school psychologists. Since the Warren schools did not employ a school psychologist full-time, but used part-time services of local psychologists on a fee basis as needed, it was necessary to purchase additional services of school psychologists on a part-time basis. The number of working days per year required for psychological services in the form of psychological examinations necessary for the identification and placement of early entrants is summarized in Table 13. Over the course of 273 assessments of pre-school

TABLE 11

TIME SPENT IN (a) KINDERGARTEN VISITATIONS, (b) RECORDING OBSERVATIONS OF VISITATIONS, (c) PREPARING RECOMMENDATIONS FOR CANDIDATES FOR EARLY ADMISSION, AND (d) STUDY OF PSYCHOLOGICAL REPORTS BY THE ELEMENTARY PRINCIPALS AND KINDERGARTEN TEACHERS

Activity	Time Spent by Elementary Principals (aggregate)	Time Spent by Kindergarten Teachers (aggregate)
Kindergarten Visitations	range from none to 9 hours per year	range from none to undeterminable; change in lesson plans
Recording Observations of Visitations	range from none to 1.5 hours per yr.	range from none to one hour per year
Preparing Recommendations for Early Entrance Candidates	range from none to 1.5 hours per yr.	range from none to 2 hours per year
Study of Psychological Reports	range from one to 10 hours per yr.	range from 3 hours per year to undeterminable

TABLE 12

ADDITIONAL JOB MODIFICATIONS AND REPORTS OF CHANGE IN APPROACH OR ATTITUDE TOWARD JOBS BY WARREN SCHOOL PERSONNEL

School Officials	Additional Job Modification	Additional Time	Changes in Approach or Attitude Toward Job
Superintendent of Schools	Hand sign all correspondence to parents	2-3 hours per year	Led us to a closer look at individualization of instruction and the problems of acceleration. We had been conservative. It has given us prestige and pride in our work.
Assistant Superintendent of Schools	---	---	It has altered the way in which we think and deal with mentally superior youngsters. We no longer think so much of acceleration in the form of grade skipping. We try to maintain a sequential program. It's main effect has been in the form of a difference in attitude.
Director of Elementary Education	---	---	It has focused our attention on the use of psychological tests. We now look more at the total child. We are looking beyond the child's academic achievement.
Home and School Visitor	Reading psychological reports	25-50 hours per year	My job is no longer that of the traditional attendance-guidance person. I function more than before in the role of school psychologist. There is now more administrative and supervisory work for me.

TABLE 12 (continued)

ADDITIONAL JOB MODIFICATIONS AND REPORTS OF CHANGE IN APPROACH OR ATTITUDE TOWARD JOBS BY WARREN SCHOOL PERSONNEL

School Officials	Additional Job Modification	Additional Time	Changes in Approach or Attitude Toward Job
Elementary Principals (aggregate)	additional time in classroom observation	---	More interest in reading professional literature. Reading has shifted from curriculum to early childhood education. Seem to think more in terms of individualizing instruction. Our thinking has been stimulated. Members of the community seek my advice. Focused attention on improvement of instruction. No change - early entrance is consistant with my goals and patterns of behavior.
Kindergarten Teachers	extra report cards for the project staff	---	Makes my job more challenging. Our planning is different. It has made us more concerned with individualizing instruction. It makes us stop thinking of children as average this or average that. It has made me most uncomfortable; I spend time fighting. It has forced me to be more flexible in my thinking. It has forced me to realize there is no set CA for starting each child. My morale is not high. Psychological tests and reports are a new dimension to the job.

children two psychologists kept records of the time required. Time accounted for included that for the psychologist's part in making the appointment, establishing rapport with the child and parents, the parental interview, including the Vineland Social Maturity Scale, examination of the child, talking with the parents and answering questions, scoring tests, and dictating reports. Examinations were done in a standard setting with materials and equipment supplied by the project. The mean time for one psychologist was 104 minutes and 115 minutes for the other. For the two combined the mean was one hour and 49.5 minutes per assessment. Thus, the assessment of four children would take, on the average, 7.3 hours. The time required for the psychological services has been calculated on a case load of four subjects per day. While that estimate of number of evaluations per day was realistic based on the experience of the psychologists in Warren, it could readily be altered to suit situations elsewhere.

Costs of psychological services:

School psychologists were paid on a per case basis, with the local prevailing rate being the standard for payment. Table 14 summarizes the cost, per year, the professional services of school psychologists.

Costs of materials:

The cost of test materials for psychological examinations was estimated at $1.00 per subject. Standard achievement tests other than those normally employed by the Warren schools were purchased in the years 1963-64 and 1964-65 for use in first and second grade. These costs are summarized in Table 15.

Typing, Stationery, Postage and Related Clerical Costs:

A detailed analysis of the costs of clerical time and supplies

TABLE 13

ADDITIONAL PROFESSIONAL SERVICES (SCHOOL PSYCHOLOGIST) REQUIRED BY THE WARREN SCHOOLS FOR THE EARLY ENTRANCE PROGRAM, 1962-65

	School Year Examination Performed			
	1961-62	1962-63	1963-64	1964-65
Number of Psychological Examinations	334*	346*	246	282
Number of Psychological Examinations Per Day	4	4	4	4
Total Days per year for psychological services	83.5	86.5	61.5	70.5

*Examinations were done during 1961-63 on the 315 children who had entered kindergarten at the regular age in 1961, in addition to the pre-school examinations.

TABLE 14

COSTS PER YEAR OF PROFESSIONAL SERVICES OF SCHOOL PSYCHOLOGISTS

	School 1961-62	Year 1962-63	Year 1963-64	Year 1964-65
Number of Psychological Examinations	334	346	246	282
Cost per psychological examination	$ 8.00	8.00	8.00	8.00
Total Cost per year	$ 2672.00	2768.00	1968.00	2256.00

TABLE 15

COSTS OF INTELLIGENCE TESTS AND ACHIEVEMENT TESTS FOR 1962-65

	School Year 1961-62	School Year 1962-63	School Year 1963-64	School Year 1964-65
Number of Psychological Examinations	334	346	246	282
@ $1.00 each for test materials	$334.00	$346.00	$246.00	$282.00
1st grade achievement tests	*	*	57.50	63.79
2nd grade achievement tests			*	88.00
Total cost test materials	$334.00	$346.00	$303.50	$433.79

*No additional achievement tests required indicated that the figures were $2.28 per child for those recommended for early admission and $2.05 for those not recommended. The analysis included a substantial amount of ancillary record-keeping that was necessary because of the investigative nature of the project, and some of the costs would not be found in an operational program alone. With such special costs removed, the overall average per child is estimated at $2.00.

Unit Cost Per Child:

Summarizing the relevant costs from Tables 14 and 15 and adding the clerical costs, the unit cost is shown to be $11.00 per child. This figure will need to be interpreted as the cost of providing individual pre-school psychological evaluations under the conditions and using the procedures of the Warren project. It does not take into account some items which might be added for overhead (heat, light, office expense) nor does it take into account reductions in other school costs (group intelligence and readiness testing, parental conferences) which might be realized because of the effects of the individual pre-school evaluations.

Discussion

Superintendent of Schools: The Superintendent reported that twenty to twenty-five hours of his time was spent in an average year on early entrance activities. He reported that this time, which was not additional but involved a change in the use of his time, was hard to determine because the activities had become so much a part of his daily routine. The Superintendent has been a champion of the early entrance program and indicated he spent time making sure that school personnel who felt any reservations had a foundation in fact for their reservations.

The Superintendent was the only member of the central office staff who remained in the employ of the Warren Schools and in the same position during the course of the demonstration. It can be speculated that, had there been less turnover in his staff, the amount of time he devoted to the project might have decreased after the first year.

He indicated that the early entrance program had its main effect in leading them to a sense of pride in their work. A change from a somewhat conservative outlook on educational innovation had led them to re-examine their provisions for individualizing instruction.

The most important aspect of the impact of this change in admission policies on the job of the Superintendent appeared to take the form of an alteration in the way in which he approached his job. A man nearing retirement age, he was willing to invest his time and effort in an educational innovation which he was convinced would be good for the school district.

Assistant Superintendent of Schools: The Assistant Superintendent reported that he delegated much of the responsibility for its administration and became involved only occasionally as a consultant when problems arose. His major function, which involved twenty to thirty hours of his time, was in searching and interviewing for a full-time school psychologist.

The Assistant Superintendent who was interviewed had joined the Warren Public School staff midway in the demonstration. He replaced the Assistant Superintendent who had been involved in the initiation of the project. The latter had moved to a superintendency in another city.

The Assistant Superintendent felt that the early entrance program had altered

> "the way in which we think and deal with mentally advanced youngsters. We no longer think so much of acceleration in the form of grade skipping....we try to keep a sequential program....I would say the effect has been in the form of a difference in attitude."

The Assistant Superintendent mentioned one of the suggested advantages of early entrance over grade skipping; that of obviating the dangers of gaps in a child's education. His mention of "trying to keep a sequential program" may be a hint at the larger problem; that of breaking down the lock-step graded school system to accommodate the individual progress of all children.

Director of Elementary Education: Reorganization within the supervisory staff structure of the Warren Schools began, coincidentally, immediately after the demonstration began. It was occasioned by moves on the part of staff members, resulting in reassignment of duties. The elementary education directorship remained open for a time, being filled by a newcomer to the school system when the demonstration was near mid-point. The time estimates which follow are based on estimates of the present director.

The Director of Elementary Education estimated that he spent over 200 hours a year involved in early entrance activities. He also estimated that 20 to 25 per cent of his yearly time was spent in these activities.

His involvement spanned a wide range of activities, both administrative and supervisory in nature (see Tables 1-4, 6-9). Although reporting a considerable amount of his time as involved in early entrance activities he also stated that it had "become part of his job."

He reflected that the major impact on his approach toward his job was in the "attention on the use of psychological tests." He also reported a change in thinking "concerning the promotional system."

Up to the advent of the early entrance program, Warren, as do many other school systems, administered individual psychological tests only as children demonstrated educational problems. Considerable impact on educational planning for the individual child resulted from the availibility of individual test results and the accompanying observations of school psychologists.

The early entrance program in Warren attracted the interest of both friendly and unfriendly observers. From time to time Warren school officials were called upon to speak to interested groups, answer correspondence from educatiors, and act as hosts to visiting interested parties. The Director of Elementary Education was responsible for the major share of these activities. He felt that his involvement in these activities enabled him to direct his thinking and re-examine his position in regard to the education of the "whole child."

The Director had considerable latitude when he took the position to organize his work and to determine what activities he would emphasize. It appears that he incorporated the data available from the early admission psychological studies of children to a very considerable extent into his supervisory activities.

The Home and School Visitor: The Home and School Visitor (school social worker) who was on the Warren Schools staff when the project started left for full-time graduate study after the second project year, and was replaced by a person who had been a teacher in Warren. The time estimates come from the present incumbent.

The Home and School Visitor reported less than 200 of his working hours were spent in early entrance activities and estimated that ten per cent of his yearly time was spent on the program. His responsibilities were chiefly concerned in the identification and admission aspects of the program. Interestingly, he reported spending considerable time in consulting with teachers concerning both the educational and school adjustment problems of the early entrants as well as in the interpretation of test results, both intelligence tests and achievement tests.

The Home and School Visitor reported the most dramatic change in approach or attitude toward his job. He indicated, "It seems like the traditional attendance-guidance aspects of my job have been altered. I function more than before in the role of a school psychologist."

This latter reported modification to his job would probably not be so strongly felt if the Warren schools had the services of a full time school psychologist. Recruitment is now going on to fill such a post, created since the project began. A school psychologist could relieve both the Director of Elementary Education and the Home and School Visitor of many of the responsibilities they now undertake. This would allow them to more actively pursue the supervisory, curricular, instructional, counseling and guidance aspects of their jobs.

Elementary School principals: There was a wide disparity in the reported range of involvement of elementary principals in the early entrance program. The range of involvement, from practically none to more than fifty hours per year, can be viewed as directly proportionate to the number of early entrants in their schools. One principal, who has no early entrants in his school, reports being involved only as the topic is discussed at meetings. Another, the only full time principal in the system, has reported active involvement in all aspects of the program.

Generally, the principals had come to accept the early entrance program as part of their job. The principals listed:

1. the impact of having psychological reports on all incoming children,
2. less provincial attitude toward educational practices,
3. increased interest in professional literature,
4. increased involvement in informal conversation concerning education,
5. stimulated interest in individualization of instruction, and
6. concern for improvement

as the major changes in their approach or attitude toward their jobs.

Most impressive was their continuing high interest in the early entrance program. Though not consistent in respect to positive attitude toward the program, they all reported being stimulated by it.

Kindergarten teachers: Three of the original six kindergarten teachers left their positions and were replaced during the project. The responses noted here were collected during the final year of the demonstration.

The kindergarten teachers in Warren reported little in the way of changes in the use of their time. Apparently the time they spend in regard to the identification and intake aspects of the early entrance program is minimal. Time spent in this respect ranged from none to three hours per year. All of the teachers reported making use of the psychological reports on all children. All but one of the kindergarten teachers indicated these psychological reports had been of great assistance.

Interesting are the comments of the kindergarten teachers concerning the way in which they viewed the early entrance program as changing their approach or attitude toward their job. These responses ranged from, "It's made me most uncomfortable" and "my morale is not high" to "it has made us look at individualization of instruction."

The most outspoken of the kindergarten teachers, one who expressed a negative attitude toward early entrance, freely admitted that the program had been of definite value in three ways, in spite of her opposition to it. These were:

1. It has forced flexibility in thinking.
2. It has made teachers focus on individualization of instruction.
3. It has forced the realization that there can be no set age for starting each child.

Another teacher reported that since she expected nothing special of the early entrant her job remained unchanged.

From the data concerning the changes in use of time and approach or attitude toward the job one can conclude:

1. The Director of Elementary Education and the Home and School Visitor are the most affected in regard to change in use of time.
2. There has been little impact of the program on the changes in the activities of other school personnel interviewed.
3. The program has had a beneficial effect in regard to change of approach or attitude toward their jobs in that
    a. they report re-examination of provisions for individualization of instruction;
    b. it has given them pride in their work; and
    c. they make more use of psychological test results for all children.

Psychological Service: Part-time school psychologists who performed the pre-school testing for the early entrance project were paid on a per-case basis. The rate was fixed at that prevailing locally. Based on an estimate of four cases per day, it was shown (Table 13) that since the initiation of the early entrance project, the professional services of a school psychologist were required an average of 75.5 days per year. This 75.5 days per year is approximately one-third of the working days of a school psychologist working on an eleven month basis.

Further extrapolation of the data in Table 14 shows that the average payment per year for the services of a school psychologist was $2,413. This figure is less than one-third of the estimated salary of a school psychologist based on the prevailing local rate.

Actually, from one point of view it is not entirely appropriate to assess the total cost to the early entrant project. The services and costs are of direct benefit to not only the early entrants but to all incoming children and eventually to all teachers as well. It is an unusual situation to find in the entry records of all children in a school district the results of individual psychological testing to use in planning instruction for all the children. That the results were used that way is attested in the comments of kindergarten teachers, principals and others.

Additional costs for materials necessary for the intelligence and achievement testing were summarized in Table 15. These costs ranged from $303.50 to $433.79, per year.

The Superintendent of Schools announced in 1964 that the Warren schools were actively seeking a full time psychologist. Also, included in the 1965-66 school budget is $3,000 from the Pennsylvania State Department of Public Instruction intended to help underwrite early entrance costs. It is standard practice in Pennsylvania that the costs of such special educational services may be reimbursed from state funds when they meet professional standards.

This figure is very close to the average yearly expenditure to date for testing services and test materials.

The hiring of a school psychologist will have the effect of relieving the Home and School Visitor and the Director of Elementary Education from some of the responsibilities they now assume concerning the early entrance project. This advantage is of course in addition to the normal advantages of having a school psychologist.

In summary, the impact of the early entrance program on the modification in the activities of school personnel and in the associated costs has been minimal. The impact on change of approach or attitude toward their jobs has been seen as beneficial. The changes in attitude or approach extended beyond the consideration of the early entered child and included a change toward focus on provisions for individualization of instruction.

COMPARATIVE STATUS OF EARLY ENTRANT CHILDREN AND OTHERS

In the literature reviewed earlier in this report evidence is presented on the achievements of children admitted early to school on the basis of criteria used in this demonstration. The literature shows that such children can be expected to equal or exceed their older classmates in academic skills, in social and emotional development, and in motor skills.

Even though there was such evidence from other school systems, it was considered advisable to keep records on the 36 early entrants (see Table 16). As was noted in the demonstration proposal, there was no intent to research the comparative achievement of early entrants and regular entrants with rigor. None the less, the development of the children was watched and comparisons were made with the development of their classmates.

TABLE 16

CHILDREN EXAMINED AND ADMITTED EARLY TO SCHOOL, 1961-65*

1964-65 Term Grade Placement	Boys	Girls	Total
Kindergarten	1	6	7
Grade One	0	8	8
Grade Two	1	10	11
Totals	2	24	26

* A total of 36 children were actually admitted early during the three years. Eight children, four of them boys, moved out of the school district before the end of the 1964-65 term. Two others, girls, were re-assigned to their regular age-entry groups after admission early, one after extensive illness and absence and the other being caught up in an emotionally negative home situation.

On conventional teacher evaluations of achievement in academic and social-emotional development and on standardized achievement tests there were no findings which contradicted previous reports of comparisons between the early entrants and their classmates in general. This was not unexpected, but it was reassuring.

Two comparisons are reported here, however, to fill in certain gaps in the previous research. The first is a sociometric comparison between early entrants and classmates and the second is a comparison of the academic achievement of early entrants matched with regular entrants of like capacity.

Sociometric Comparisons

The question is sometimes asked if highly able young children are not hampered in social development by early admission to school. It is asked whether the children, though they do well enough academically, might not be at a disadvantage in their social interactions with the children who are their classmates.

Members of the project staff interviewed all children in the first and second grades in the elementary schools of Warren. Each child was asked two typical questions used in sociometric data-gathering, one about which children in the classroom he would invite to participate in a social activity and another about which children he would choose to work with him on a group project in school. Arrangements were made to talk individually with each child, just outside the door of his classroom. The data-questions were imbedded in more general conversation after the child was considered to be at ease.

Analysis of the sociometric data revealed nothing to suggest that early admitted children were perceived any differently by their classmates from the way the other children in the class were perceived. Neither did the early admitted children appear to be essentially different from the other children in the way they perceived themselves and their classmates.

The results of the sociometric measures were in accord with the opinion expressed about the children by the first and second grade teachers in whose classes they were. It was noted by teachers, principals, supervisors and occasional visitors that the early entrants could not be distinguished from the other children in the classroom.

School Achievement Comparisons

Hobson (1948, 1962) reported the results of a longitudinal study of selected mentally advanced early entrants, compared with all other classmates. However, no studies were located which compared the academic progress of mentally advanced early entrants with regular entrants who were IQ-grade-level peers in the same classrooms. This gap in existing research was considered an important one.

Because of the following conditions, the Warren study offered an opportunity to make a comparative study of academic achievement of mentally advanced children, of the same grade level, some being regularly admitted and the others admitted early.

1. The early entrance of children in Warren started in 1962. Children eligible for normal school entrance in 1962 on the basis of CA were not, therefore, considered for early entrance.
2. It was found that of the 276 normally entering children (September, 1962), 53 had Stanford Binet IQ's in excess of 125.
3. The Warren schools had an established testing program, utilizing standardized readiness and achievement tests.
4. Demonstration project funds were available for adding first and second grade tests to the Warren testing program.
5. School officials and teachers together with the project staff collaborated in the testing program.

The question whether children admitted early are at a disadvantage in achievement in the primary grades when compared with regular entrants of like capacity was examined. During the course of the project Devaty (1964) and

Marks (1965) did separate investigations with the Warren data on that point.

The first study used as criterion measures marks assigned by teachers on report cards. Three groups of early admitted children who were in second grade were matched on intelligence quotients with three groups of regularly admitted children. In one of the three compared groups, (A-B) some control was exercised over the teacher variable by matching with children in the same second grade classroom, while the others (C-D, E-F) the classroom placement was not controlled. All matching by intelligence quotient was on the 1960 Stanford-Binet Scale of Intelligence Tests.

TABLE 17

COMPARISON GROUPS MATCHED BY INTELLIGENCE QUOTIENT

Group	N	Mean I.Q.	Mean in Months CA	Mean in Months MA	Matching	Teacher Variable
A	4	142.5	83	118	Within 3 I.Q. Points	From same
B	4	143.2	90	129	" " "	Classroom
C	6	139	82	114	Within 3 I.Q. Points	Regarlesss of
D	6	138	91	126	" " "	classroom
E	12	141	82	115	Within 12 I.Q. Points	Regardless of
F	12	138	90	122	" " "	classroom

School marks recorded by teachers on report cards for the end of the first semester of 1964-65 (January 25, 1965) and the first report period of the second semester (March 5, 1965) were criteria. The two report card periods were treated separately.

Teachers marked by the following code: 5-superior, 4-above average, 3-average, 2-below average, 1-not passing. Marks were given for seven subjects: reading, arithmetic, language, spelling, writing, music and art. Comparisons of total mean achievement marks were made between the matched groups. In arithmetic, language and writing.

Using the sign test (Siegel, p. 58, p. 250), none of the differences between the matched groups was significant at the one percent level of confidence. There was no significant difference in the achievement of early entrants and regular entrants of like intelligence quotient, achievement being measured by marks given by teachers on report cards.

As part of the same study, two comparison groups of children were matched on mental age. In one of the comparisons the teacher variable was partially controlled by selecting matches from the same second grade classrooms.

TABLE 18

COMPARISON GROUPS MATCHED BY MENTAL AGE

Groups	N	Mean I.Q.	Mean in months		Matching	Teacher Variable
			CA	MA		
G	10	141.2	81	115	Within three	From same
H	10	123.7	93	115	Mos. M.A.	classroom
J	12	140.9	82	115	Within two	Regardless of
K	12	124.5	92	115	Mos. M.A.	classroom

None of the differences on total mean achievement marks nor on the specific subjects was significant at the one percent level of confidence. There was no significant difference in the achievement of early entrants and regular entrants of like mental age, achievement being measured by marks given by teachers on report cards.

As part of the Warren Project, Marks (1965) compared 12 early entrant children and twelve regular entrants on a number of variables. The children had entered kindergarten at the same time, September, 1962. The comparisons were made when the children were near the end of the second grade. They were in the same grade in the same school system, but all had not had the same teachers. Attrition by moves and other changes had left only twelve of the original nineteen early entrants; the entire remaining group was used, all having completed three years of school.

Matching on intelligence quotient, sex and socio-economic level could not be accomplished satisfactorily. Table 19 shows the data as of beginning kindergarten for the two groups.

TABLE 19

CHARACTERISTICS OF EARLY ENTRANTS AND COMPARISON
GROUP AT KINDERGARTEN ENTRY, SEPTEMBER, 1962

	Early Entrants					Comparison Group				
	Range	Mean	Standard Deviation	Sex B	Sex G	Range	Mean	Standard Deviation	Sex B	Sex G
Age (Mos.)	49-56	53.6	2.2			57.69	62.6	3.8		
I Q	119-153	140.9	10.4			121-156	135.1	8.3		
M A (Mos.)	67-83	75.2	4.4			79-105	84.1	7.8		
Height(ins.)	39-48	42.9	2.4			41-48	43.4	2.4		
Weight(lbs.)	34-51	40.5	4.6			32-61	41.9	7.8		
Sex				1	11				4	8

The only characteristic in Table 19 on which matching was attempted was intelligent quotient. Because of the limited pool from which the comparison group could be drawn, satisfactory matching could not be accomplished, and the difference in mean intelligent quotients was significant of the one percent level of confidence by the Wilcoxen Matched-Pairs Signed-Ranks Test. However, since these comparisons were the closest approximations feasible between all the remaining early entrants and regular entrants available near the close of the term, the comparative analysis was continued. It is important to note that the comparison group, though averaging six points lower than the early entrant group on intelligence quotient, was nevertheless a bright group whose average was in the range which would have permitted early entrance. Also, the comparison group was markedly and significantly superior in both mental age and chronological age, at the one percent level of confidence.

Table 20 summarizes the comparisons between the early entrance group and the comparison group on kindergarten achievement. There were no significant differences between the groups on any of the achievement measures at the one percent level of confidence.

TABLE 20

KINDERGARTEN ACHIEVEMENT OF EARLY ENTRANTS AND COMPARISON GROUP:
N, CRITICAL VALUE OF T (T), AND SIGNIFICANCE OF DIFFERENCES (P)

	(x) N	(y) T	(z) P
Reading Readiness (1)	12	16.5	N.S.*
Number Readiness (1)	12	22.0	N.S.
Total Readiness (1)	12	19.0	N.S.
Group Living (2)	6	5.0	N.S.
Physical Development (2)	3	2.0	N.S.
Personal Habits (2)	5	6.0	N.S.
Work Habits (2)	5	6.0	N.S.
Conduct (2)	6	7.0	N.S.
Pre-reading (2)	6	7.0	N.S.
Self-expression (2)	6	7.0	N.S.
Number Work (2)	5	6.0	N.S.

(1) Metropolitan Readiness Test - Kindergarten 1962-63 - Number Ratings
(2) Kindergarten Teachers Grades - 1963

(x) N = Number in the groups minus ties
(y) Wilcoxen Matched-Pairs Signed-Ranks Test
(z) Siegel, S., Non-parametric Statistics for the Behavioral Sciences, McGraw-Hill, 1956, Table G., p. 254

* In all cases .01 level of significance

TABLE 21

FIRST GRADE ACHIEVEMENT OF EARLY ENTRANTS AND COMPARISON GROUP: N, CRITICAL VALUES OF T (T), AND SIGNIFICANCE OF DIFFERENCES (P)

	N(x)	T(y)	P(z)
Word Knowledge (1)	12	12.0	N.S.*
Word Discrimination	12	17.5	N.S.
Reading	11	17.5	N.S.
Arithmetic	12	16.5	N.S.
Reading	9	18.0	N.S.
Arithmetic	8	11.0	N.S.
Writing	9	20.0	N.S.
Art	8	16.0	N.S.
Music	8	12.0	N.S.

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(1) Metropolitan Achievement Test, Primary One, Form A, First Grade, May, 1964, Raw scores
(2) First Grade Teacher Final Grades - June, 1964

(x) N = Number in the groups minus ties
(y) Wilcoxen Matched-Pairs Signed-Ranks Test
(z) Siegel, S., Non-parametric Statistics for the Behavioral Sciences, McGraw-Hill, 1956, Table G., p. 254

* In all cases .01 level of significance

TABLE 22

SECOND GRADE ACHIEVEMENT OF EARLY ENTRANTS AND COMPARISON GROUP: N, CRITICAL VALUES OF T (T), AND SIGNIFICANCE OF DIFFERENCES (P)

	$N^{(x)}$	$T^{(y)}$	$P^{(z)}$
Word Knowledge (1)	10	7.0	N.S.*
Word Discrimination (1)	9	22.0	N.S.
Reading (1)	10	9.0	N.S.
Spelling (1)	12	38.0	N.S.
Arithmetic Concepts (1)	11	14.5	N.S.
Arithmetic Computation (1)	9	11.0	N.S.
Total - Arithmetic (1)	10	7.5	N.S.
Reading (2)	[illegible]	6.5	N.S.
Arithmetic (2)	7	2.5	N.S.
Language (2)	8	6.0	N.S.
Spelling (2)	7	9.0	N.S.
Writing (2)	6	9.0	N.S.
Music (2)	9	20.0	N.S.
Art (2)	4	5.0	N.S.

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(1) Metropolitan Achievement Test, Primary Two, Form A., Second Grade, May, 1965

(2) Second Grade Teacher Final Grades - June, 1965

(x) N = Number in the groups minus ties

(y) Wilcoxen Matched-Pairs Signed-Ranks Test

(z) Siegel, S., Non-parametric Statistics for the Behavioral Sciences McGraw-Hill, 1956, Table G., p. 254

* In all cases .01 level of significance

The academic achievement of twelve early entrants and a comparison group was reported for a three year period, kindergarten through second grade. These early entrants to school in the Warren, Pennsylvania school system had been selected on the basis of intellectual superiority, emotional, social and physical maturity. Academic achievement was measured with standard achievement tests as well as teacher grades. Thirty-four comparisons in achievement were made. Eleven were in kindergarten, nine in first grade, and fourteen in second grade. None was significantly different at the one percent level.[1]

Children matched closely on mental age were compared, as were children matched closely on intelligence quotient. Early entrants were compared with regular entrants in their progress through kindergarten, first and second grades.

When the comparisons reported in this section are considered together, it is difficult to find support for the notion that early entrants are at any disadvantage in achievement in the primary grades when compared with regular entrants of like capacity.

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[1] Three differences of the thirty-four favored the comparison group at the five percent level of confidence. The three were scattered over first and second grade. Two of the differences were on word knowledge in first and second grade. The other was on total arithmetic score in second grade.

ATTITUDES TOWARD THE EARLY ENTRANCE PROGRAM

Teacher Attitudes

Hiskey (1962) noted that teachers and administrators still tend to reject early entrance to school for mentally advanced children "....in spite of the preponderance of positive evidence" (p. 50). Hobson (1962) reported that although seven of eight elementary school principals and the majority of the first grade teachers in Brookline, Massachusetts, supported the early entrance program, the majority of the kindergarten teachers opposed it.

The project staff used questionnaires to assess the attitudes of the Warren, Pennsylvania school teachers toward the early entrance program. The study first tapped the attitudes of the teachers in the initial year of the adoption of the program. The teachers were grouped according to grade level; e.g., elementary, junior high, and senior high. Initially the least favorably inclined of the three groups were the elementary school teachers.

The section below presents data collected during the third year of the study on attitudes of Warren school teachers toward the early entrance program. Included are:

1. A report of the responses of teachers to a question calling for memory of initial attitude toward the project.
2. A tabulation and categorization of their reasons for such attitudes.
3. A report of the responses of teachers to a question calling for their present attitudes toward the project.
4. A tabulation and categorization of the expressed reasons for changing their attitudes.

Procedure:

There were a total of 191 teachers in the Warren schools in May, 1965: Primary (K-3), N = 36; Intermediate (4-6), N = 30; Junior High (7-9), N = 60; Senior High (10-12), N = 65. Each teacher was asked by the superintendent, through the principals, to respond to a questionnaire designed to assess teacher attitude toward the early admission program (see Appendix H). A project staff member visited each principal in order to re-enforce the instructions of the superintendent. Teachers were not to identify themselves, but were requested to indicate the grade level of their teaching assignment.

The responses of the teachers were analyzed as follows:

1. Question one: Frequency of response by category (highly-favorable; favorable; etc.) was determined (a) for all teachers, and (b) for teachers by grade level: primary, intermediate, junior high and senior high.

2. Question two: Reasons given for responses to question one were categorized and tabulated according to logical groups (i.e., research evidence, educational theory or belief, psychological theory).

3. Question three: Frequency of response by category (highly-favorable; favorable, etc.) was determined (a) for all teachers, and (b) for teachers by grade level (e.g., primary, intermediate, junior high, and senior high). Since some teachers altered the scale in question three by inserting a "neutral" category, the number of categories reported for question three was six as opposed to five for question one.

4. Question four: Reasons given for response to question three, which responses were to indicate reasons for change in attitude, were categorized and tabulated according to logical groups (i.e., research evidence, educational theory or belief, psychological theory).

Results:

Question one: 150 of the 191 teachers responded to question one, or 78.5% response. Percentage of response by grade level was: Primary, 94%; Intermediate, 96.6%; Junior High, 65%; Senior High, 73%.

Table Twenty-three summarizes responses by attitude as follows:

All teachers: Highly Favorable, 4.6%; Favorable, 20.6%; Neutral, 30%; Unfavorable, 37.3%; Highly Unfavorable, 7.3%.

Primary (K-3) teachers: Highly Favorable 0.0%; Favorable, 23.5%; Neutral, 32.3%; Unfavorable, 38.2%, Highly Unfavorable, 5.8%.

Intermediate (4-6) teachers: Highly Favorable, 20.6%; Favorable, 17.2%; Neutral, 34.4%; Unfavorable, 24.1%; Highly Unfavorable, 3.4%.

Junior High (7-9) teachers: Highly Favorable, 0.07%; Favorable, 23.0%; Neutral, 33.3%; Unfavorable, 38.4%; Highly Unfavorable, 5.1%.

Senior High (10-12) teachers: Highly Favorable, 2.0%; Favorable, 18.7%; Neutral, 22.9%; Unfavorable, 43.7% Highly Unfavorable, 12.5%.

Question two: Below are the positive and negative factors expressed by teachers under question two on the attitude questionnaire. These causal factors have been categorized and examples presented for each category as follows:

Positive Factors:

Educational Challenge and Opportunity--Young bright children should not be held back by rigid entrance standards; children should be challenged when they are ready for school; gifted children become bored in a grade where there is no challenge; often the busy teacher cannot challenge him at his age-grade level; if he is held back he will get successively more bored with school; a good way to get the opportunity for advanced work; this program gives the gifted a break--they've been neglected.

Educational Theory--Early entrance eliminates the dangers of grade skipping; kindergarten is the best place to instill good work habits at an early age; this program will solve some problems in the upper grades; there is no danger to children in acceleration; provides sound basis for homogenous grouping.

Psychological Theory--Learning situations should be presented to children as soon as they are ready; there is a crucial time for learning; gives them the chance to learn at their own developmental level; mentally advanced children who are held back will not make good social-emotional adjustments; a good way to solve the problem of individual differences in the classroom.

Research Evidence--Some children have been able to read before age six; evidence presented by Terman in Genetic Studies of Genius; reports that early entered children had done as well or better than classmates; the research evidence on individual rates of learning.

Social Outcome--This is a way of conserving our talent; apparently a more objective way to use our brainpower.

Personal Belief--Believe it would have helped my family; I feel many children will benefit; the program seems only right to me; I feel gifted children should be pushed; the project seemed well thought through; I believe that those who had checked into it undoubtedly know what they were doing.

Professional Experience--People and former students I know have suffered no ill effects from acceleration; former students, mentally advanced, have impressed me.

Local Need--There was a definite need in our town for such a program.

Negative Factors:

Early Environment--Early entrance robs children of the joys of childhood; we seem to be cutting down more and more on childhood time what has been determined about this early separation of child and mother?; children need time to be children; we can't supply the losses of early separation of the child from his home; children this age need maternal care; parental influence is more important than an early start on education.

School Readiness--Children's eyes, coordination, motor responses and attention span are not well enough developed at that age to concentrate on school work; physical maturity is as important as mental maturity; most mentally advanced children tend to be withdrawn or shy; a year more and they would be at the top of their class; younger children are not the best students; too immature despite high IQ; young children have difficulty working independently; IQ tests are deceptive yardsticks for school entrance; early precocity does not hold up; these young children are not emotionally mature.

Research Evidence--The Gesell Institute research condemns early entrance because too many brilliant children reach high school and college too young; the Gesell Institute has shown overplacement to be the greatest cause of school dropout and poor attitude toward school; overplacement causes delinquency.

Physical Development--Would physical development parallel their mental development?; lack of physical preparedness may have a crippling influence; they will be physically immature in high school; even as seniors the boys won't be physically mature and this will cause a handicap in sports; won't be able to cope with older children physically; boys won't be physically prepared for college.

Personal-social Development--Teenage adjustment of early entrants yet to be seen; too emotionally immature in the intermediate grades; they will not adjust socially or emotionally to their groups because they will be too young to join the scouts or YMCA when their friends do; they are deprived of social contacts because of social immaturity; too emotionally and socially immature in high school; socially immature child has a lonely school career; not mature enough at sixteen to decide on college or a carrer; too young for the labor force; how about getting jobs to earn money for college; they will be too young to drive at the same time as their classmates.

Professional Experience-- I have taught only one gifted child in twenty-five years experience; my thirty-three years experience with the dangers of pushing; I have yet to see a four year old do well in kindergarten; my experience is that younger children have difficulty in the upper grades; staying in their seats is difficult; in my years of teaching I have seen too many children frustrated trying to cope with problems beyond their years; they become bitter and defiant because of inadequacy.

Personal Belief-- I believe they are too young for school; educators push children tragically in today's national drive toward excellence; this project refutes all I believe in--more maturity means better success; under this program a nine year old might enter junior high school--would you want this for your child?; if this were a gratis program with no publicity, wouldn't it fade?; why pressure young children to the point where they must have psychiatric care? I couldn't see any outstanding advantages.

Teacher Preparation-- Concern about the proper preparation of teachers involved.

Project procedures-- The testing and rating method has been invalid or of little useful value, more boys than girls selected, for example; I question the validity of the tests given--it seems to depend on what they have learned at home.

Costs-- Small benefits will not justify the expense; the limited school dollar could be used where a greater per cent of the public's children profited--too many programs for the upper ten per cent.

Fad-- I was concerned lest a fad develop because of undue enthusiasm.

Appropriateness of early entrance as instructional modification-- Larger school enrollment and ability grouping provides the opportunity for advanced work, and eliminates the dangers of physical and social immaturity when they reach high school.

Question three: 142 of the 191 teachers responded to question three, or 74.3 per cent response. Percentage of response by grade level was: Primary, 91.6%; Intermediate, 86.6%; Junior High, 60%; Senior High, 72.3%.

TABLE 23

SUMMARY OF RESPONSES OF TEACHERS CONCERNING INITIAL ATTITUDES TOWARD EARLY ADMISSION (QUESTION ONE, APPENDIX C)

ALL TEACHERS: N=191 RESPONDENTS N=150 % RESPONDENTS--78.5%

(1) Highly Favorable	(2) Favorable	(3) Neutral	(4) Unfavorable	(5) Highly Unfavorable
N= 7 %= 4.6	N=31 %=20.6	N=45 %=30.0	N=56 %=37.3	N=11 %= 7.3

PRIMARY (K-3): N=36 RESPONDENTS N=34 % RESPONDENTS--94%

(1) Highly Favorable	(2) Favorable	(3) Neutral	(4) Unfavorable	(5) Highly Unfavorable
N= 0 %= 0.0	N= 8 %=23.5	N=11 %=32.3	N=13 %=38.2	N= 2 %= 5.8

INTERMEDIATE (4-6): N=30 RESPONDENTS N=29 % RESPONDENTS--96.6%

(1) Highly Favorable	(2) Favorable	(3) Neutral	(4) Unfavorable	(5) Highly Unfavorable
N= 6 %=20.6	N= 5 %=17.2	N=10 %=34.4	N= 7 %=24.1	N= 1 %= 3.4

JUNIOR HIGH (7-9): N=60 RESPONDENTS N=39 % RESPONDENTS--65%

(1) Highly Favorable	(2) Favorable	(3) Neutral	(4) Unfavorable	(5) Highly Unfavorable
N= 0 %= 0.0	N= 9 %=23.0	N=13 %=33.3	N=15 %=38.4	N= 2 %= 5.1

SENIOR HIGH (10-12): N=65 RESPONDENTS N=48 % RESPONDENTS--73%

(1) Highly Favorable	(2) Favorable	(3) Neutral	(4) Unfavorable	(5) Highly Unfavorable
N= 1 %= 2.0	N= 9 %=18.7	N=11 %=22.9	N=21 %=43.7	N= 6 %=12.5

Table 24 summarizes responses by attitude as follows:

All teachers: Highly Favorable, 6.3%; Favorable, 27.4%; Neutral, 6.3%; Negative, 8.4%; Unfavorable 38.7%; Highly Unfavorable 12.6%.

Primary (K-3) teachers: Highly Favorable, 3%; Favorable, 48.4%; Neutral, 9%; Negative, 9%; Unfavorable, 18.1%; Highly Unfavorable, 12.1%.

Intermediate (4-6) teachers: Highly Favorable, 19.2%; Favorable, 19.2%; Neutral, 11.5%; Negative, 11.5%; Unfavorable, 30.5%; Highly Unfavorable, 7.6%.

Junior High (7-9) teachers: Highly Favorable, 2.7%; Favorable, 16.6%; Neutral, 5.5%; Negative, 2.7%; Unfavorable, 58.3%, Highly Unfavorable, 13.8%.

Senior High (10-12) teachers: Highly Favorable, 4.2%; Favorable, 25.5%; Neutral, 2.1%; Negative, 10.4%; Unfavorable, 42.5%; Highly Unfavorable, 14.8%.

Since the terminology used in the attitude questionnaire was not the same in both instances on Question One and Question Three, comparative analysis was not conducted. Also, since there had been substantial turnover in teachers it was not appropriate to draw firm conclusions from the responses to Question One and Three, which asked about initial and present attitude toward early admission. With those limitations in mind, it may be added that the largest single attitude disparity appears among the primary teachers, with none being highly favorable and 23.5% favorable (combined: 23.5%) at the outset and 3% highly favorable and 48.4% favorable (combined: 51.4%) at the close. The primary teachers, of course, were those who had direct experience with the early entrants in their classrooms.

Question Four: Forty-nine teachers responded to Question Four by listing as causal to attitude change both positive and negative factors.

TABLE 24

SUMMARY OF RESPONSES OF TEACHERS CONCERNING PRESENT ATTITUDES TOWARD EARLY ADMISSION (QUESTION THREE, APPENDIX H)

All Teachers: N=191 Respondents N=142 % Respondents 74.3%

	(1) Highly Favorable	(2) Favorable	(3) Neutral*	(4) Negative	(5) Unfavorable	(6) Highly Unfavorable
N=	9	39	9	12	55	18
%=	6.3	27.4	6.3	8.4	38.7	12.6

Primary (K-3): N=36 Respondents N=33 % Respondents 91.6%

	(1)	(2)	(3)*	(4)	(5)	(6)
N=	1	16	3	3	6	4
%=	3.0	48.4	9.0	9.0	18.1	12.1

Intermediate (4-6): N=30 Respondents N=26 % Respondents 86.6%

	(1)	(2)	(3)	(4)	(5)	(6)
N=	5	5	3	3	8	2
%=	19.2	19.2	11.5	11.5	30.7	7.6

Junior High (7-9): N=40 Respondents N=36 % Respondents 90.0%

	(1)	(2)	(3)	(4)	(5)	(6)
N=	1	6	2	1	21	5
%=	2.7	16.6	5.5	2.7	58.3	13.8

Senior High (10-12): N=65 Respondents N=47 % Respondents 72.3%

	(1)	(2)	(3)	(4)	(5)	(6)
N=	2	12	1	5	20	7
%=	4.2	25.5	2.1	10.6	42.5	14.8

*Respondents altered the scale so that "negative" reads "neutral"

These factors have been categorized and examples presented for each category as follows:

Positive Factors:

Information-- Further information from those associated with the project altered my thinking; the reports have been favorable; there seems to be proof of early success; I've read the literature on the subject; favorable reports from kindergarten and first grade teachers; reports show the early entrants are adjusting beautifully.

Professional experience-- Three years of teaching; it works beautifully in our school; my experience with the early entrant; the two I have taught have been excellent; these children are an asset to any group.

Meets a Need-- We needed a program like this; this helps meet our need for educational betterment of our society.

Screening-- The screening procedures have become more selective.

Negative Factors:

Information-- Some of the parents have been sorry that they allowed early entrance; they have exhibited a lack of social maturity; they have not been physically or socially ready for school; the social and personal implications of being placed outside of their peer group; from reading and observing I concluded an extra year at home would be more beneficial; research has shown early entrance is not the answer to redevelopment of home stimulated attitude.

Screening-- Many children were not truly gifted, raise the IQ; screening not intense enough; we accepted some who lacked capabilities for the program; the entrance test discloses those who are socially advanced, not mentally advanced.

Evaluation-- The University of Pittsburgh is against failing those who do not do well; later reporting the mistakes in screening to parents should have been the responsibility of the powers that be, not the teacher; objectivity of the experiment is questionable.

Professional experience-- I have seen several who would have done better with an additional year of maturing; the early entrants I have seen could not do the things required of other students, not mentally mature enough; their muscular immaturity makes it difficult to write well; they are hindered socially and academically; none that I've had has been a success; those we have pushed are nervous wrecks.

Costs-- Costs and time of such a program cannot be justified.

Personal belief-- I feel the program is adding academic failure and unhappiness for otherwise successful pupils; I believe it is just a status symbol to many educators and parents; I feel we need to re-evaluate the criteria; I feel this has led to a rush to adultness; I see no need for it; not convinced they should leave home.

Teacher Attitude-- The initial and present attitude of teachers in the Warren, Pennsylvania schools toward a change in school admission policies was assessed. Factors reported by teachers as influencing their initial attitude as well as factors influencing changes in attitudes were collected and categorized. With a 78.5 per cent response of 191 teachers, initial attitude was reported as follows:

4.6% Highly Favorable

20.6% Favorable

30.0% Neutral

37.3% Unfavorable

7.3% Highly Unfavorable

With a 74.3% response to a question calling for present attitude the teachers responded as follows:

6.3% Highly Favorable

27.4% Favorable

6.3% (Neutral)

8.4% Negative

38.7% Unfavorable

12.6% Highly Unfavorable

A greater percentage of the teachers reported attitudes in the unfavorable than favorable categories. At the same time there was an apparent shift out of the neutral category, some going toward the favorable and some to the unfavorable side with the result that both were increased. This observation must be tempered by the limitations on evidence of attitude change noted earlier.

It was found that when asked to recall their initial attitude toward a change in school entrance policy the Warren teachers showed a high percentage of unfavorable responses. This held also when asked to indicate present attitude toward the early entrance project. In searching for an explanation for the high percentages of unfavorable attitudes in light of favorable research results into the effects of early entrance, an examination was undertaken of the negative and positive factors listed by the teachers as causal both to initial attitude and change in attitude.

An analysis of the negative factors yields the following points.

1. Early environment: Teachers advanced as causal to their initial negative attitude toward provisions for early entrance to school that early school entrance cuts down on the joys of childhood, that the child needs the early home environment in order to develop good habits, that early separation of child and mother is somehow harmful. This argument, espoused by some educators connected with the Early Childhood Education Association (Rasmussen, 1962), has in fact not been subjected to systematic study. Barney (1962) addressed this argument by concluding:

   "There is some anecdotal evidence which suggests that they (gifted children) may, in fact, be happier in a kindergarten where more opportunities exist for exploring, following up their interests, finding out for themselves, testing their ideas, etc. It is conceivable that admitting some of these children early may *add* to the joys of childhood rather than detract from it" (p. 7).

2. School readiness: Teachers holding negative attitudes argued that children entered early in school were physically and emotionally immature and would not be able to concentrate on school work and that most mentally advanced youngsters tend to be withdrawn or shy. These arguments, in the light of research evidence, do not hold. The results of this study showed that the early entered children were not significantly different in either height or weight from the comparison group which averaged nine months older in chronological age. The smallest and lightest child was found among the regular entrants. An inspection of the grades assigned by the Warren primary teachers to the two groups also would tend to negate their own arguments. The grades assigned as follows,

Kindergarten: Physical Development, Personal Habits

First Grade: Writing

Second Grade: Writing

though not significantly different, favored the early entrance group.

Terman's study (1925) showed that mentally advanced children tended to be taller and heavier, better looking and stronger than their average peers. Early entered children in Massachusetts (Hobson, 1948, 1963), Nebraska (Worcester, 1956), and Pittsburgh (Birch, 1954) have been shown not to be at a disadvantage in regard to physical development and social and emotional adjustment.

The expression "most mentally advanced children tend to be withdrawn or shy" is an anachronism that persists in spite of what is known of the personality characteristics of the gifted child. This kind of statement when tracked to its source is found to be based on very limited experience with mentally advanced children. Certainly there are withdrawn or shy children among the population of gifted children, just as there are withdrawn or shy children among the population of blind children. This observation, however, should not lead to the generalization that most blind children are withdrawn or shy. Gifted children, by virtue of their superior intellectual ability should, conversely, be better equipped to cope with their environment.

3. Research evidence: Citations of research evidence that were causal to negative initial attitude of teachers toward early entrance are vague. Some of the conclusions reached by Ilg and Ames (1965) in their studies at the Gesell Institute do show that some children may not be ready for the fixed school curriculum. Their concept of overplacement is that a child is not ready for a particular stage of the educative process (p. 14). These stages have been pre-determined by the rigidity of the curriculum. It can be suggested that perhaps the child is not overplaced, but undertaught.

4. Physical development: Teachers advanced as a negative factor the presumed physical immaturity of bright, young children in high school and college. To counter this one could cite the following research findings:

    a. Terman (1947, p. 279): educationally accelerated gifted subjects tended to reach puberty before the non-accelerated comparison group.

    b. Professional athletes have reached stardom in their middle teens. Examples noted have been Bobby Jones (golf), Sonja Henie (skating), Vincent Richards (tennis), Mel Ott (baseball), and Eddie Lebanon (football) (Worcester, 1956, p. 53).

c. Studies by Keys (1938) and Pressey (1949) show that the underage college or high school student is not at a disadvantage when it comes to extra-academic participation.

Recent Olympic games have shown a noticeable trend in younger and younger star athletes. High school football may be predominant in the mind of the parent or teacher who argues against educational acceleration.

5. Personal-social development: Teachers with initial negative attitudes considered them to be caused in part by their observations concerning the personal-social development of the early entrant as compared with his grade-level peer. They would be too young to join the Boy Scouts or YMCA; won't get driver's licenses at the same time; won't be mature enough to decide on a college career; won't be able to date at the same time as their grade-level peers. There is reason to believe that as a group these children will develop normal social behaviors, that they will want to join, will want to date, and to drive cars. Social institutions and laws fix the age for participation in many of the advantageous activities of our society. With adequate parental guidance these children, arriving at social milestones at an earlier age than their grade-level peers, should make adequate adjustment. The younger gifted child is different from his grade peers regarding the need for career counselling. Because of his intellectual superiority he should be able to understand better the consequences of alternate career choices. This would tend to make him a better client for the school counselor.

6. Professional experience: Listed as causal factors for negative attitudes toward the early entrance project were observations drawn from the professional experience of Warren teachers. Statements such as "I've taught only one gifted child in twenty-five years," "my experience that younger children have difficulty in the upper grades", "staying in their seats is difficult," and "they become bitter and defiant because of inadequacy," indicate (1) lack of depth of experience, (2) inadequate observational techniques, or (3) faulty interpretation.

7. Personal belief: The responses listed under this category indicate a lack of information. There is no rejoinder to the statement "it refutes all I believe in." However, that children are "tragically pushed," that "under this program a nine year old might enter junior high school—would you want that for your child?", and "they must have psychiatric care" indicate the possession of a certain amount of misinformation at the outset.

8. Teacher preparation: One teacher stated that a concern for adequate teacher preparation was causal to a negative attitude toward the early entrance project. Early entrance to school

does not depend on specially trained teachers, only adequately trained teachers. The adequacy of teacher preparation should transcend consideration of an early entrance program.

9. Project procedures: Teachers voiced concern about the validity of the testing program for identification and selection of the early entrant. The multiple criteria utilized in the selection of the early entrant; i.e., IQ, MA, physical, social, and emotional maturity, have been demonstrated to be successful. One of the original early entrants was held back in the first grade. School officials have indicated that problems other than those related to early school entrance were causal in the relatively poor school progress of this child.

10. Costs and Fad: It is difficult to justify the expenditure that means a diversion of the educational dollar. However, the actual costs of an early admission program, especially when the side effects for other children are considered, are defensible.

11. Appropriateness as an instructional modification: This point has been previously discussed. Additional appropriate arrangements might be special grouping, enrichment or an ungraded school. Under the circumstances, early entrance seems appropriate.

Responses to Question Four on the attitude scale calling for a listing of factors causal to change in attitude toward the early entrance project were tabulated according to negative and positive characteristics. It was decided to inspect the factors listed under Question Four to determine the nature of the factors causal to change in attitude.

Those indicating a change to positive attitudes toward the early entrance program listed the following as causal to positive change in attitude:

1. Further information from the literature and from the results of the Warren study concerning the school success of the early entered child.

2. Professional experience with the early entered child.

3. The realization that the early entrance program met a local need for educational provisions for mentally advanced children.

4. The belief that screening and identification procedures had become more selective.

Interestingly, these same factors, among others, were listed as causal to negative change in attitude by other teachers:

1. Further information from the literature shows early entrance is not beneficial. The children in the Warren study have not been physically or socially ready for school.

2. Professional experience has shown that the early entrants could not do the things required of other students. Their muscular immaturity makes it difficult to write well. They have been nervous wrecks.

3. There is no need for the program. It is just a status symbol.

4. Many of the children were not really gifted. The screening is not intense enough. It discloses those who are socially advanced, not mentally advanced.

5. The project staff is against failing the early entrant.

6. The feeling that the program is adding academic failure and unhappiness.

7. The costs can't be justified.

Attitude has been defined as "a way of thinking about a given subject." In light of this definition it appears that (1) those who held initially negative attitudes and (2) those who indicated that their present attitude had changed to a negative attitude listed as causal factors for these attitudes reasons which were largely,

1. based on misinformation
2. based on mis-interpretation of data
3. based on belief or position which held as untenable a change from the normal way of doing things.

The nature of the expressed attitudes of the teachers in Warren near the outset of the project were not essentially different in tone or content toward the conclusion of the formal demonstration. This is not inconsistent with the situation in Brookline, Massachusetts, where the practice has been in effect for more than thirty years. Personal communications between Dr. Barney and Dr. James Hobson of Brookline indicate that kindergarten teachers there, particularly new professional staff members, continue to voice objections like those indicated in this study. It seems important to add that the teachers at Warren were fully cooperative with the policy and practices of the school system, taking a highly professional approach to the discharge of their responsibilities to the children, whether or not they were early entrants. They were quite free in telling the project staff members their view points, whether positive or negative. Moreover, they were generally able to discuss their view points without personalizing.

Parental and Family Characteristics and Reactions

Parental Participation in the Project: Overall parental response and participation in the pre-school examinations was at a high level. The following statements apply to the experience in Warren, when the previously described procedures for contacting parents were used. The percentages are rounded to the nearest whole number.

a. Ninety-one percent of parents arranged to have their children seen by the school psychologists.

b. The remaining nine percent did not wish to take part in the program. Follow-up visits revealed a variety of reasons. In no cases were parents pressed to participate.

c. Of the children the psychologists decided might be possible candidates and who were sent on to the next step, a visit to kindergarten, 70% were recommended for early entrance by the committee.

In only a relatively few instances were there difficulties because of broken appointments or similar matters. Such problems were dealt with centrally, through the office of the home and school visitor, relieving the psychologists and the kindergarten teachers of unwarranted drains on their time and allowing the home and school visitor the opportunity to make the necessary interpretations to the families involved.

Children Recommended for Early Admission

During the year after the first group of children was admitted early

(1962), an analysis was made of parental reactions. That was followed in 1964 by another analysis. In both, data available in the schools were supplemented by interviews with the parents. Staff members of the project went to the homes by appointment to conduct interviews. It was not possible to arrange schedules so that both parents could be contacted in all instances, but in the majority both mother and father were present.

An interview guideline was used (see Appendix I). All interviews were recorded. In each case parents were assured that the interview content would be kept confidential. There was no reluctance either to respond to questions or to allow the material to be recorded on the portable equipment carried by the interviewer. In fact, the staff members who did the interviewing noted that the recording of the interview seemed to stimulate conversation in a number of cases.

The screening committee had made 26 firm recommendations to parents for early admission of children for September, 1962. All but one had I.Q.'s over 130. The mean I.Q. was 140.

The ultimate decision on early entry rested with the parents. Nineteen chose to send their children.

The 26 families were interviewed to discover, among other things, reasons for refusal or acceptance of the early admission recommendation and resource persons in the community they had consulted. Of the seven who were not entered, one family accepted the recommendation but moved from town. In another case the father was acceptant but the mother was opposed, and her view held until she later changed her mind, too late for entry to be effected. A third family agreed to early entry but in the week prior to the opening of school changed their minds on the advice of a pediatrician who warned of what he thought would be the adverse effect of social immaturity at the secondary school level. Possible eventual social difficulties were also the prime concern of the other four families, all parents of boys. Among the parents of the 19 admitted about half reported having decided to accept the recommendation, if offered, before they actually received the notice from the Superintendent of Schools.

The 1962 recommended early entrants spread across the social scale (See Table 25), although tending to the upper levels in both the ranking of the father's occupations and the educational levels reached by parents.

TABLE 25

SOCIO-EDUCATIONAL DISTRIBUTION (1962 GROUP)

Criteria	Not Recommended (N=199) (% of N)	Recommended (N=26) (% of N)
Parent's Educational Level:		
F &/or M > High School	34.7	50.0
F &/or M attended High Sch.	55.8	42.3
F &/or M < High School	9.5	7.6
Father's Occupation*:		
1	6.5	23.0
2	16.6	19.2
3	17.6	11.5
4	22.1	23.0
5	6.0	3.8
6	10.0	15.3
7	19.1	3.8
Unemployed	1.0	-
No Father	1.0	-
Index of Social Status*:		
Upper Class		
Upper Middle		
Lower Middle		
Upper Lower		
Lower Lower		
Unemployed or no father		

*McGuire and White (1952) "Measurement of Social Status"

Among the parents approving early admission there is a suggestion of difference in their reasons in relation to level of education. For parents with less education the decision more frequently was based on a combination of pride and their own lack of educational opportunity. On the other hand, college graduate parents perceived boredom, disinterest, and a need for a greater range of intellectual stimulation for their children not apparently available at home. Some noted that their children gravitated to older playmates. But it was this group, too, who consulted family physicians, teachers and grandparents. All reported believing that the psychologists' advice was the soundest they were likely to get.

Continuing with the 1962 group, one-half of the children recommended were either first or only children. That is a much higher proportion than in the total population and a practical explanation for the frequent comment from the mothers that in coming to a decision they had to guard against the emotional reaction against losing their babies. This also argues for further investigation in connection with some theories of the development of intelligence which suggest that the only and first children are in a position to receive greater intellectual stimulation from their parents than those in medial positions.

TABLE 26

POSITION IN FAMILY (1962 GROUP)

	Total Group N=225 (% of N)	Not Recommended N=199 (% of N)	Recommended N=26 (% of N)
Only	8.4	8.0	11.5
First	27.1	25.6	42.3
Middle	22.2	23.6	11.5
Last	42.2	43.2	34.2

The interviews conducted in 1964 were not essentially different in what they showed about the parents and the children. They did add two items of information which furnish another perspective whose observation depended partly upon elapsed time.

First, the parents who had accepted early admission for children were not sorry they had done so. That was the case in all but two instances, and those were the ones in which it had been necessary to reassign the children to their regular entry groups. All others said they would do it again if given the opportunity.

Second, the parents reported that they had experienced no problems in their home neighborhoods on account of their children being admitted early. Their neighbors and friends seemed to take rather calmly the fact that differentiation of age of school admission was being practiced, frankly and openly, on the basis of differences in measured readiness for school. Those whose children were recommended for early admission were pleased, naturally. On the other hand, they reported that their neighbors whose children were not recommended for early admission did not seem inordinately displeased.

Children Not Recommended For Early Admission

A persistent question of administrators and psychologists is how to deal with the reactions of parents, especially parents who believe their child should be among the early entrants when the selection data indicates otherwise. Not only is this query a frequent one, but it is almost always greeted with interest by the others in the discussion group, as though they, too, were sure that a serious problem had been raised. Indeed, parental reactions to failure to admit children early must be an important problem in some situations, for there is no other reasonable way to account for the constancy and seriousness with which the question is introduced.[1]

The significant finding from Warren is this: no reason was encountered to expect difficulties with parents, even parents of children who desire and are refused early admission for their children. In fact, the opposite appears to be true.

In the entire sequence of more than 800 children considered for early entrance over a three-year period, only two families expressed dissatisfaction over the recommendation against early admission. On the other hand, there were many appreciative comments made by parents who had wished early admission for their children but who were convinced by the interpretations given to them by the psychologists that early admission would not be in the children's best interests. Experiences in Warren confirm the findings from other localities which found generally positive responses from parents.

The parental reaction may well be a function of how the matter is handled from the side of the school. Conditions favorable to accepting and cooperative parental reactions include the following:

1. An early and systematic search for all children who might be admissable early, conducted on the initiative of the school, is desirable. In such a case, all parents are asked by the school to permit study of their children to determine whether early school admission would be advisable. This study is done long before the time for possible school admission looms. That relieves the parents of the necessity to make application for

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[1] The only report located in the literature which described negative reactions of parents as a major problem was that of Mawhinney (1964). There were a number of procedural factors in the early admission program he described which were markedly different from those used in the Warren Demonstration. Even at that, it is difficult to understand why he found that "The overwhelming majority of parents of children denied early entrance reacted negatively." In programs generally similar procedurally (i.e. Brookline, Mass., Pittsburgh, Pa.), the parental reactions he described were quite rare.

early admission. If the child is not found to be ready for early admission, the condition of parents being refused something they requested is often forestalled.

2. Regular and community-wide dissemination of information about the possibility of early admission to school, and the reasons for the provision, is helpful in assuring cooperative parental attitudes. Parents are informed about the concern the schools have for making such decisions in terms of the child's best educational interests.

3. It is advisable, also, to provide ample opportunity for parents to have discussions with the psychologists who examine their children. That, of course, calls for psychologists who are skilled in interpreting educational planning for normal as well as exceptional children to parents. This point may be particularly important, since psychologists may not typically be as oriented to assessing and planning educationally for pre-school age normal children as they are with school-age problem children.

In essence, we have concluded that problems associated with negative parental reactions to early admission programs may be markedly reduced or avoided altogether if the initiative for locating children is taken by the school system, if dissemination of information is emphasized, and if well-prepared psychologists are available for interpretive conferences. That conclusion is reinforced by the evidence from parental follow-up interviews.

Administrators' and Supervisors' Attitudes

These can be best seen from two kinds of data. One is the responses made when the administrators and supervisors were queried about modifications in their jobs occasioned by the project. Second is the reflections of the attitudes of administrative and supervisory personnel in staff meetings and in recommendations to the Board of Education.

Review of the comments made by principals, supervisors, directors, the home and school visitor and the superintendent and associate superintendent indicate predominantly favorable attitudes. None were negative and only a few were non-committal. The attitudes showed not only positive valence toward early admissions as practiced in Warren but also an appreciation for a number of consequences of the project which might be called side effects.

The staff meetings of the administrators and supervisors were open to the project staff members. Also, project staff members took many opportunities for individual conferences with principals and others on an informal plane. Uniformly, these conferences revealed favorable attitudes. The reports made by Warren administrators and supervisors to the Board of Education, official reports appearing in the Board minutes, were also positive in tone. The recommendation that the Board of Education continue the project on its own came from the Superintendent and had the support of those in administrative and supervisory positions.

General Community Attitudes

Such attitudes are difficult to assess in any systematic way, and no effort was made to do so. Anecdotal evidence, however, points to favorable reactions. For example, the head of the local radio station conducts a question and answer period in which listeners telephone questions. The program is a popular one; it deals with community problems. The radio reporter stated that he had many questions about the early admission project at the time it started. The questions dealt mainly with matters of information. During the course of the project there were fewer and fewer questions about the project. The reporter indicated that he detected nothing that would suggest negative attitudes.

Members of the project staff from the University sometimes lived at Warren for weeks at a time. They became acquainted with townspeople who talked with them about the project. Here, too, there were evidences that the people of Warren were pleased with the early admission activity on the part of the school system.

Editorial comment in local papers was favorable. So was the tone of news and feature stories which appeared during the course of the project.

Perhaps as significant as anything else about general community reaction was the acceptance by the Board of Education of responsibility for continuing the program. Board members tend to be sensitive to and knowlegeable about public opinion, and they are reluctant to make moves which the general public does not favor.

Summary

The attitudes of teachers continue to be mixed, with little evidence of change. While the reasons for negative attitudes on the part of teachers can be shown to be unfounded for the most part, the presence of negative attitudes is not altered thereby. Attitudes of administrators and supervisors seem generally to be favorable. The parents and the community in general are also favorably inclined toward early admission for selected students, as near as can be determined from the data available.

DISSEMINATION OF INFORMATION

Target Audiences

From the outset efforts were devoted to making the demonstration highly visible. The general public on a national scale was one target audience. Since the general public are consumers in relation to the schools, it seemed advisable to inform them about the opportunities of early admission to school for all children who might profit from it. A second target audience was that part of the general public who are leaders in the formation of public viewpoints. Included were persons in the labor, business, farm, professional, political, cultural and educational sectors who tend to be looked to for guidance leading to decision-making in general in their communities, large and small. The third target audience was public and private school elementary and secondary educators in general, including teachers, supervisors and administrators at all levels. The fourth target group was the professional educational leaders who have a significant voice in recommending policies and in determining practices in elementary schools. Among these are superintendents, supervisors, principals, teacher-educators, and school psychologists.

Dissemination Procedures

There was no ready-made apparatus that would guarantee wide and accurate dissemination of information about the project, either in the local community in which the demonstration took place or on state, regional, national or international levels. In the United States the public information media are largely privately owned. The selection of input information for the media channels is a matter of judgment on the part of reporters, newscasters, editors and columnists, whether in broad-scale media like newspapers and radio or specialized media like professional journals and newsletters. That condition posed a major problem, for the financial resources of the project were not sufficient to allow the staff to mount a major dissemination program through preparation and mailing of publications or purchase of advertising time and space. In short, the conventional saturation approach to selected audiences, as employed by commercial interests, was not possible. Other means had to be found.

Fortunately, the story of the project proved to be interesting to news media personnel. The notion of selecting bright preschoolers and starting them to school before the usual time caught the fancy of reporters for its human interest value and also captured professional attention among educators. It seemed to arouse excitement wherever it was mentioned. It engendered controversy, also, and that quality seemed to make it even more newsworthy in the eyes of lay and professional editors alike.

At the same time, there were significant barriers to dissemination other than financial ones. The Board of Education of Warren, along with the project staff, concluded early that certain kinds of publicity might be damaging to the children and might unduly influence the operation of the demonstration. Therefore, guidelines were established. No individual pictures of children would be released, nor any group pictures in which early entrants would be identified. Children in the program would not be named in any information releases. News interviews would not be arranged with parents. Classroom visitations would be limited. All staff members of the Warren schools and the project would be sensibly cautious in statements for quotation.

The reasons for guidelines were understood and appreciated by all concerned, and the guidelines did not in any way operate to censor the dissemination of the facts about the project. However, the guidelines sharply limited the possibility of news stories which could focus upon irrelevancies, portray minor aspects of the demonstration in sensational terms, or distort the general process by subjective individualization. In a number of instances possibilities for dissemination on a very broad scale through various media had to be foregone. A major magazine was interested in telling by pictures and text the family and school life story of one early entrant as representative of all of them. Several national radio and television appearances might have been arranged for individual children and their parents. Opportunities to do stories in depth on the smallest or the youngest child were requested. However valuable the result in dissemination of information about the project might have been from such national coverage, the personal and professional considerations embodied in the publicity guidelines were thought to be more important by the project staff, the school staff, and the members of the Board of Education. It should be noted here that the personnel of the two newspapers and the radio station in Warren understood and accepted the limitations not only with good grace, but in a genuine spirit of responsible cooperation.

The project staff members agreed upon a broad effort for dissemination. It was based on the use of all possible media to reach the four target audiences. Since staff members had only limited prior experience, they called upon consultation from the staff of the Public Relations Office of the University of Pittsburgh.

The plan for dissemination which emerged encompassed several elements.

1. News releases would be issued from the Warren Schools, the University

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of Pittsburgh, and the Pennsylvania Department of Public Instruction. These would be coordinated, with the releases from different points increasing the chances of the use of the releases by news media.

2. Priority in the early part of the project would be given to the newspapers and radio stations in Warren, since dissemination of certain information about the project operations in the local community was essential. In this connection, releases were given alternately to the morning and afternoon papers.
3. General information stories with feature elements would be released from time to time and attempts would be made to have them used by the wire services.
4. Efforts would be made to interest free-lance writers in developing popular magazine feature stories about the project.
5. Efforts would be made to interest television and radio news and feature shows in the Warren project.
6. Staff members would accept every possible opportunity to speak to lay or professional audiences. This effort would be concentrated in and about Warren early in the demonstration, but spread thereafter.

Records were kept of newspaper stories through a clipping service. Every other information-spreading activity which originated with project staff members was noted.

The broad-scale dissemination of information within Warren began with a front-page news story in the Warren papers when the Board of Education passed a resolution to undertake the demonstration for a year. That story, however, did not take school personnel and other community leaders by surprise. For several weeks the superintendent of schools and his staff had been studying and discussing the project. The officers of the Board and the solicitor, for example, had also talked about it. There had been preparation. and the resolution by the Board came after a presentation by the principal investigator and a period of subsequent discussion without the principal investigator being present.

Immediately following the announcement in the newspapers, a series of meetings with groups and organizations was initiated. One of the first included the Mayor of Warren, the presidents of the Chamber of Commerce, the Zonta Club, the Business and Professional Woman's Association, the Lions Club, the executive vice president of the Chamber of Commerce, the Warren school physician, and school officials. Another was with all local P.T.A. presidents. Another was with representatives of local newspapers and radio stations. They had, of course, to be fitted into existing schedules. Over the period of the demonstration, the following groups in Warren were addressed by project staff members, mostly in the first year, while children were being evaluated, preparing for early admission the next fall.

Board of Public Education
Parent-Teachers Association Council
Individual P.T.A.'s of six elementary schools
Future Teachers of America
Warren County Medical Society
Faculties of all public schools
Service clubs of the community
Kindergarten Teachers Association
Principals and Supervisors Staff Meetings

In addition, informal meetings arranged by school officials allowed the project staff to become acquainted with city and county office-holders, various businessmen and other professional and social leaders. Newspaper and radio staff members also talked informally with the project staff. The emphasis, in all of the initial dissemination in Warren, was on presenting facts about the demonstration in as many different ways through as many media as many times as possible. This emphasis continued as dissemination moved to the regional, national and international scenes.

Extent of Dissemination

The general public was probably reached most widely by the wire service news stories and by national network commercial television, both of which carried feature and news stories several different times on the Warren Demonstration. The newspaper clipping service reports included evidence that 195 newspapers in 35 states carried stories about the project. That, of course, is a minimum figure since clipping services do not cover all papers. It is not possible to estimate the extent to which the general public was informed by those news stories. However, the combined circulation of the newspapers involved is in the millions.

The same can be said of the network (CBS) television show which told the Warren Project story on the Mike Wallace Show nationally televised in the mid-morning hours in mid-September, 1964 (times and days vary with local schedules). The text and pictures of that show also reached millions of persons, according to general audience survey reports of the networks and television audience analysts.

For the region around Warren, the Warren radio station and Pittsburgh radio and television were both used several times, at prime time spots (noon news; evening), to give news and answer questions about the project.

The extent of dissemination to "thought leaders" by news stories can be referred to in another way. Signed articles by columnists, particularly columnists who write about education, should be important sources of information to those sectors of the public who have interests or responsibilities regarding education. During the four years, nationally syndicated columns describing the project were written by Dr. Benjamin Fine (North American Newspaper Alliance), Mr. Erwin Knoll (Advance News Service) and Miss Terry Ferrer (New York Herald Tribune Service). Distinguished newspapers such as the Christian Science Monitor and the New York Times gave substantial space to the story both as news and through commentary. Dissemination to this audience, as it is represented in University of Pittsburgh alumni, was made through two articles, one a brief outline and one a feature article with pictures, in Pitt, whose circulation is 70,000. They appeared about a year apart. The articles reached every state in the United States, and 6,000 of the mailings went to other countries. Also of importance is the fact that the feature Pitt article was reprinted in the U.S. Congressional Record.

Certainly there is some overlap among the four audiences at which dissemination was aimed. For the general educators, though, and the educators with decision-making roles, some of the dissemination activities were more focussed. The two most wide-spread items to reach the educators with decision-making roles were an article in School Life (June, 1964) and a complete outline of the project in Administrative Action Report (October, 1964) of the Croft Educational Service.

The article in School Life provided a full overview of the demonstration from its research justification, its theoretical foundations, its operations, to its outcomes to that date. The article was designed to be sufficiently complete that teachers, supervisors, school superintendents, principals or university instructors would be able to use it as part of the basis for decision-making in their own situations should they be involved in the question of whether early admission should be used. The same intent and degree of completeness characterized the Administrative Action Report of Croft Educational Services. According to the records of that company, the publication went to 8,000 subscribers in school systems in all parts of the United States.

Other dissemination activities seemed to reach one or more components of the target audiences, in the project staff's judgment. These activities included:

Newsmagazine Articles

Time (U.S. and Overseas Editions)

New York Times (Sunday education page)
Week-end News (Perth, Australia)

Specialized Journals and Newsletters

Education Bulletin, Pennsylvania State Education Association (January, 1962)
Newsletter, Pennsylvania State Department of Public Instruction (December, 1963)
Science (February, 1963)
Tri-State Area School Study Council, (July, 1962)
School Boards (National School Boards Association) Sept. 1963
Journal of School Psychology (Spring, 1965)

In each case above there was sufficient information in the article to give a reader a general idea of what was going on in the Warren Demonstration. Each article included enough identifying data to allow the reader to write to the project if he wished. In some cases, for example the New York Times items, rather complete information was given.

Project staff members participated directly in spreading information about the project, as did members of the staff of the Warren Public Schools. It was commonplace to be asked about the demonstration by friends and acquaintances at meetings, conferences and conventions. More formally, reports on aspects of the project were presented as papers. Papers were presented by one or more project staff members at the following meetings, nine national, one regional and one state. (Appendix J)

American Educational Research Association - Atlantic City, N.J., February, 1962

American Association for the Advancement of Science - Philadelphia, Pa., December, 1962

State Elementary School Principals Association, Wernersville, Pa,. October, 1962

National Education Association, Denver, Col., July, 1962

Council for Exceptional Children, Philadelphia, Pa., April, 1963

Council for Exceptional Children, Chicago, Illinois, April, 1964

Council for Exceptional Children, Portland, Oregon, April, 1965

American Psychological Association, New York City, August, 1961

American Psychological Association, Chicago, Ill., September, 1965

National Association of State Consultants for Education of the Gifted
Pittsburgh, Pa., March, 1963

Regional Elementary Education Conference, Bloomsburg, Pa., October, 1965

Copies of journal reprints and of the papers delivered at the above meetings were used in answering letters requesting information on the project. In addition, the project staff put together, in September, 1962 a bibliography of relevant research on early admission. This, too, was distributed at meetings and used in responding to letters of inquiry.

Two groups were judged to be of particular importance in determining whether early school admission for mentally advanced children would be widely accepted. These were the school psychologists of the nation and the state education agency staff members charged with responsibility for educational programs for the gifted. Special efforts were made to reach these groups with information about early admission in general and about the Warren Demonstration in particular.

The school psychologists were rated high as a special dissemination target audience because members of that group seemed concerned about and involved in the matter. They had studied and published on early school admission often. They devoted professional meetings to discussion of the practice. Their own professional activities in school systems would be profoundly influenced by whether or not the practice was used. School psychologists were called upon to take the major role in recommending whether or not specific children would be admitted early. All in all, there seemed to be good reason to think that the opinions of school psychologists on early school admission for mentally advanced children would be sought by school superintendents, boards of education, parents and others.

Three specific dissemination activities were directed at the nation's school psychologists. At the very beginning of the project the evidence in support of early admission was presented in a paper delivered at the group's national convention. During the course of the demonstration notes were kept on the particulars of the school psychologist's role. Two of the staff members prepared an article, published in the Journal of School Psychology, which set forth the salient activities and responsibilities of a school psychologist in a program for early admission. Third, a paper was given at a subsequent national convention of school psychologists in which both opponents and proponents of early school admission aired their views. The three dissemination activities, it was planned, would reach a sufficient number of psychologists to assure that the project came to the attention of that significant group.

The state education agency staff members charged with responsibility for educational programs for the gifted had very high priority, also, as a target audience. In the majority of states, one person on the staff of the state superintendent of schools had responsibility for fostering, promoting, advising about, and otherwise assisting the schools of the state in developing the special education needed by the mentally advanced and talented. These staff members were found to have formed an organization and to hold a national professional meeting annually. Since early school admission for mentally advanced children was asknowledged to be one form of special education provision for the gifted, it was proposed that the group hold one of its annual meetings in Pittsburgh and that a large portion of the program be devoted to the Warren demonstration. Thus, in addition to all other dissemination activities, this very significant group had at least a full day of papers, panels, direct discussions, questions and answers, and informal talk with Warren School System staff members and University staff members. Thirty states and U.S. possessions were represented. One year later, at the next annual meeting in another city, one of the project staff members was an invited guest of the group and was able to give a brief progress report on the demonstration. This group, also, was mailed a summary of the results of the demonstration.

In some cases it did not prove possible to determine the extent of a certain dissemination activity. It is known, for example, that a division of the Council for Exceptional Children, the Association of Educators of the Gifted, distributed information on the project through a national mailing to its membership. Papers on the project were distributed along with the regular mailing of the Association's newsletter. Whether similar activities took place with the following groups is not known, but there was that opportunity when replies were sent to their inquiries.

American Association of University Women (Whittier, California, Branch)
Southern Association of Colleges and Schools, Atlanta, Georgia
Yeshiva English Principals Association, New York City
Canadian Teachers Association, Ottowa, Ontario
Committee on Education and Labor, U.S. House of Representatives
Pennsylvania Association for Study and Education of the Gifted

The dissemination of information about the demonstration was such as to reach millions of persons, including representatives of all of the target audiences. The content of the dissemination material was as inclusive as possible. Target audiences were reached through a variety of media and on repeated occasions.

Effectiveness of Dissemination

One evidence of the effectiveness of dissemination of information about educational innovation is the unsolicited response. In this instance, the dissemination efforts were not accompanied by enticement to respond. The major methods of dissemination such as bulletins, newspaper, television, and reading paper, did not lend themselves to any such device. Therefore, the response, mainly letters written to the University of Pittsburgh and the Warren Public Schools, can be considered unsolicited. Table 27 shows the number of responses by categories.

TABLE 27

RESPONSE TO DISSEMINATION

Respondents	N	States Represented	Target Audiences Represented			
			1	2	3	4
Colleges and Universities	35	23		x	x	x
Individuals	90	27	x	x		
Public and Privare Schools	80	23			x	x
State Education Agencies	8	8		x	x	x
Other U.S. Agencies	8	7	x	x		
Foreign Countries	5					

There were, for example, unsolicited letters from 35 colleges and universities in 23 different states. In all, there were unsolicited responses from 40 different states and five foreign nations. This shows that at least one of the several forms of dissemination brought the project to the attention of individuals and agencies with sufficient impact to cause a response in the form of a letter of inquiry or comment. Since every letter was answered, with enclosures of further information about the project, it is reasonable to expect that some secondary dissemination resulted from whatever use were made of the reply and enclosures.

Another evidence of the effectiveness of the dissemination can be found in the number of instances in which there is some documentary evidence that correspondence with agencies or individuals might have had some effect upon the policies and practice of school systems with respect to early school admission for mentally advanced children. From ten local schools or school districts in seven states there was correspondence which indicated that the demonstration in Warren, and the documentation supplied about it, was to be used in the planning of early admission programs. The same can be said for correspondence involving three state education departments concerned with state-wide provisions to permit or encourage early admission.

THE WARREN DEMONSTRATION AS INNOVATION AND CHANGE

The Warren project did deliberately effect a desirable change in education in an entire school district over a fairly short time. It should be instructive to analyze the characteristics of the change process in Warren for what it can add to the generalizable information on change and innovation in education.

Adoption of educational innovation has been measured by Mort (1964) as lagging fifty years behind the proposed innovation. Teacher attitude has been shown by Kelly (1960) as being an important factor in the rejection of an educational innovation.

Wilson (1954) was concerned that educators in general were not highly accepting of educational acceleration. However, fifty per cent of the administrators he surveyed (Wilson, 1954, p. 120) agreed with a remark of Terman's, quoted by Wilson, that children with IQ's over 135 "....should be promoted sufficiently to permit college entrance by the age of 17 at the latest" (Terman and Oden, 1947, p. 281).

A number of publications have appeared in recent years on innovation and change in education, (Blanke, 1965, Miles, 1964) and there is even more talk about both processes. Discussion of the subject was in its beginnings at the time the Warren Demonstration started. In fact, the Warren project was one of the initial demonstrations consciously planned as instruments of change in education. Since that time, efforts toward effecting changes in education have grown from a few relatively short and inexpensive demonstrations into major enterprises which occupy the attention of a variety of local, state, regional and even national centers and institutes.

Some of the recent writers attempt to draw lessons for the tactics and requirements of change from analyses of innovations which seemed to come about without much planning, like language labs and modern mathematics. Other writers are attempting to draw guidelines for more effective and speedy modifications in education from fields of experience like agricultural extension, advertising, and rural sociology. All of these approaches, and others, whether theory-related or eclectic, probably will prove helpful in understanding how changes which are desirable can best be brought about in education.

The innovation at Warren was an adaptive type, hardly to be classed as an invention. Warren was not the first school district to allow early admission to kindergarten. Neither was it the first to arrange individual psychological examinations for all its children before school admission time. And it was not the first school system, certainly, to expect individual differences in learning from young children of the same age and attempt to make adjustments for the differences. Thus, the innovation had a natural history flowing from prior events in Warren and elsewhere.

The unique quality of the innovation was to be found in the amalgam rather than in the components. Warren, was, as far as is known, the first community to deliberately interpose psychological evaluation between children and school entrance a full year or more before the standard time for kindergarten admission as a school service at no cost to the families and for the avowed purpose of determining which children should be encouraged to enter school before the usual time and, more generally, to assess the learning potential of all of the district's children long before school admission. That combination of activities was the innovation to be demonstrated.

The substantive part of the change in Warren was the adoption of a policy and the initiation of a practice about early admission to school for mentally advanced children. The process of adoption of the policy and the initiation of the practice, however, may be of more general importance. How the change was effected may have more importance in the matter of encouraging educational innovation than what change was effected.

The change which took place in the Warren Public Schools may not be a prototype for all educational change in school systems, but an analysis of the process may suggest application in other areas. The same process might be applied or adapted even though the substantive aspect might be quite different.

The following descriptive analysis of the process is admittedly subjective, being based on the pooled observations made by the group from the University who conducted that part of the demonstration. The data, however, are undeniably real. And the claim to validity for the description which emerges is based upon the data as verified by the administrative and supervisory staff of the Warren School System.

The observations are organized in somewhat the same way that Miles (1964) used to give some order to the conclusions he drew from a widely diverse group of illustrations and discussions about educational innovation. His outline was as follows:

"Educational Systems: The Context
The Innovation Itself
Innovative Persons and Groups
Prior States of Relevant Systems
The Planning and Execution of Change Processes
The Fate of Innovation"

Miles' approach was chosen for several reasons. The items in his outline are accompanied often by attempts to induce principles or criteria against which an innovation might be judged. The elements in the outline are reasonable well defined. The outline covers many aspects of educational innovation. It is eclectic, being constructed in order to present generalizable material from a variety of reports of innovation in education. It is not limited to one theoretical formulation. And it has some of the effect of an external criterion, since, being published in 1964, it obviously was not the outline upon which the Warren demonstration activities were based. A final reason for use of the Miles' outline is to increase the probability that the findings from the Warren demonstration can be related to those from other attempts at educational innovation.

Educational Systems: The Context

It has been postulated that there is a "*de facto* national system of education in America" and that it may have stimulating or limiting effects on innovation at the local level. With that assertion is the notion that autonomy in a local system is more imagined than real. Existing along with the national system, and influencing innovation, are numerous subsystems. To achieve an innovation in such a setting is a complex matter, expensive in dollars as well as time for strategy planning. An additional important component, without which innovation is particularly difficult, is a person on the local scene who persistently works toward achieving the innovation.

In most respects the Warren project experiences are consistent with the above viewpoints. So far as the *de facto* national system and subsystems are concerned, there is no question but that the demonstration was stimulated quite directly by the U.S. Office of Education and the Council for Exceptional Children, a department of the National Education Association.

The first judged the project worthy and provided funds, and the second had previously urged the adoption of the innovation through its publications. Without such encouragement neither the Warren school district nor the principal investigation would have initiated the undertaking nor, once initiated, could they have carried it on. Subsystems which contributed stimulation and material support included the Pennsylvania State Department of Public Instruction and the informal but significant impact of the evident blessing of the University. It is important to point out, however, that the Warren Board of Education did have real autonomy at two crucial stages: at the point of deciding whether to undertake the project, and at the point of deciding whether to continue the project at the conclusion of external financial support. These decisions were influenced by at least five factors. The order in which they are listed is not necessarily significant, but the first four are estimated to be necessary conditions for both decisions. First, the chief school officer was convinced that the innovation was desirable for the children of the community and he conveyed that point of view to the members of the board. Second, empirical evidence from other school systems and from Warren itself substantiated the position of the school superintendent. Third, the project could be conducted and continued at no substantial increase in cost to the school district. Fourth, while there were real differences of opinion in the community and the school staff as to the merits of early admission to school for mentally advanced children, no opposition was mounted in any systematic or substantial way and the balance of the total community reaction was favorable. Fifth, the principal investigator pledged continuing interest and commitment of time to the innovation during and following the formal conduct of the project.

It seems significant that the professional staff members most immediately concerned, the kindergarten teachers, did not initiate the innovation. Rather, the initiation came from outside the school system and reached the teachers through policy and administrative channels. The superintendent did discuss the innovation with the kindergarten teachers before giving his recommendation to the Board of Education. He found mixed reactions among the kindergarten teachers ranging from mild acceptance to strong resistance. He decided that he would recommend the innovation, however, trusting that there was sufficient open-mindedness in the entire professional staff to accept the trial.

The Innovation Itself

The following is a discussion of certain properties of the Warren project and their effects on the installation of the project as an innovation.

Cost:

The innovation did not pose a cost problem to the Warren School System, in a dollars-and-cents way. The prospect of expenses to Warren in staff time and adjustments did not seem great. On the other hand, there was a real possibility for immediate and possibly long-range profit. All of the children coming to school would have individual psychological examinations, with written reports available to the teachers. Staff members from the University would be on hand for consultation. Such benefits as these would be supported by project funds, and there was no commitment that the project would need to be carried on by local funds, even if it proved successful.

Technological Factors:

There were no special items of equipment or other technological aspects to be considered. All of the technology required for the project was already in use, in one way or another, in the school system.

Associated Materials:

No special materials such as books, cumulative records and the like were required, thus posing no barrier to the innovation.

Implementation Supports:

The implementation of the early admission program did call for the use of administrative and supervisory time in new or substantially changed ways. An example was considerable direct correspondence between the superintendent of schools and the parents of pre-school age children. Another was the integration of additional psychological services into the schools. In these and other changes, however, there was direct support from the University staff. Procedures were designed by the University staff and tested in the school system, with every effort being made to adapt to local conditions. Thus, difficulty in implementation was minimized for Warren school personnel.

There were two notable innovation/system incongruencies which had to be worked out in the Warren project if early admission to school was to become internalized in the school system. The first was the legal barrier to admission of children to school before the standard age set by state law and state and local regulation. The arbitrary minimum age requirement for school admission was well-established, and had all the comfort of years of accustomed obedience behind it. For a long time it had not been necessary to present rational arguments as to whether a child was ready for school. Rather, everyone knew that "the law" determined the age of school beginning, and that was a power too awsome to be challenged. Once the plan of the demonstration was understood by State Department of Public Instruction officials, however, that impedement was quickly removed.

The local school system was assured that it would not, under the conditions of selection provided in the demonstration, be held to the letter of the law and regulations. When that barrier tumbled, the second, and a possibly more formidable one, came into view. How was one to organize and deploy staff time in such a way as to assure that the proper children would be chosen as candidates for early admission? An important consideration was that some of the kindergarten teachers were outspoken in their doubts about the wisdom of the whole project. It was obvious that children should not be assigned to teachers against the better judgment of the teachers. The solution to that problem was to design a selection procedure which included the kindergarten teachers every step of the way. Thus, any child approved for early admission would be seen and evaluated by his prospective kindergarten teacher, and the teacher's opinion would be an important factor in the decision. That was done. It sometimes proved time consuming and awkward to administer, but it did play an important part in reducing the problem by involving the teachers directly in deciding what criteria other than age should be weighed in determining school admission. Happily, the involvement of the kindergarten teachers did prove relatively easy to accomplish, partly because it was tied to a more familiar and widely used practice, that of having as visitors in kindergarten during the school year those children who were eligible to attend the next year.

All properties of the innovation itself considered, there were none which were powerful inhibitors to initiation. On the other hand, there were several, notably cost and implementation support, which were favorable to initiation.

Innovative Persons and Groups

There is little question that innovations come into being and rise or fall as a result of the work of the persons who do the innovating. This section analyzes the innovation in Warren with respect to the personal and group factors involved.

Interdependence of Innovators and Others:

No one person produced the innovation in Warren. Actually, to name a group of persons would be misleading, too. The setting of the community, attributable to factors which defy unraveling, was a good one. The people of the community were supportive. True enough, the change was initiated from outside. But the community in all its important aspects was prepared to accept and nurture a change which promised profit to its children.

The predominant authority figure in the innovation was the superintendent of schools. That is consistent with what has been observed in many other changes in school systems. It may be important that this was not a recently appointed superintendent. Rather, it was a school official who was known by the community to be nearing the time of retirement. Thus, there was no "new-broom" or "honeymoon" quality to the setting. The readiness to accept the innovation sponsored by the superintendent seemed to be based on confidence built over years of competent and enlightened administration. Neither was this project a "flash-in-the-pan" innovative performance. A review of the career of the superintendent shows a constant, steady accretion of new practices in the Warren school system under his leadership, each begun modestly and each tending to last. The situation in Warren suggests that there is no particular upper age limit to the innovative personality. Confidence of the community in the innovative person seems to be most important.

Innovative Groups:

There are at least two identifiable innovative groups directly connected with the Warren demonstration. One was made up of members of the Warren school staff and board members. Another was made up of project staff members from the University of Pittsburgh. They provided mutual support for each other in material and intellectual ways, both feeling a commitment to the project and both taking satisfaction from its successful progress. It is very doubtful if either would have found satisfaction or have carried on successfully without the other. During the course of the three years it is probable that the University group was somewhat more dominant at the outset, with the Warren group taking over an ascendant position and becoming self-sufficient long before the formal conclusion of the demonstration. Changes within the groups, as personnel left and were replaced, tended naturally to slow both groups, but not ever to the point that momentum was lost.

Prior State of Relevant Systems

It is clear from earlier statements that in Warren, in Pennsylvania, in the University and in the nation conditions were such as to encourage change. In fact, there probably have been few other times in the history of education when change itself was such a popular concept. The nature of the change, in that it dealt with improved education for gifted children, was significant, too. The demonstration was undertaken at a time when much of the nation's leadership in all sectors of the economy was concentrating on improving education for the most able children and youth. Thus, the prior state of the relevant systems was distinctly favorable.

The Planning and Execution of Change Processes

It would have been helpful if those who conducted the Warren demonstration had been more informed about the planning and execution of change processess, especially in school systems. It was understood, of course, that the initiation of a demonstration and the management of its operations was somewhat different from the conduct of an experiment where an hypothesis is being tested. There were concerns on the part of the demonstrators at first that there might not be sufficient pay-off in generalizable information at its conclusion. That accounts for the relatively greater emphasis placed upon specifying the structure of the innovation (criteria for selecting the children, methods of selection and placement, measurement of academic achievement) as opposed to the collection of data on the change process, so significant in studying the innovation. Even so, study and planning about the processes were not overlooked.

Strategies:

Ease of acceptance of initiation of the early admission project was expected if four broad strategies could be effected. First, the project would be initiated and studied within the existing structure and functions of the school system. No new kind of staff position would be created. No fundamental changes in existing staff responsibilities would be sought. No new organizational elements would be developed inside or outside the school system. This was expected to be entirely feasible and to reduce, if not eliminate, threats to the personnel involved. Second, the Board of Education would have the option to close off the demonstration at the end of any year if it chose to do so for any reason. There would be no pressure to continue any activity considered undesirable, and the decision by the Board could be unilateral with no recourse. This was calculated to demonstrate the confidence of the demonstrators and was an earnest of their sincerity. Third, a full year would be spent in preparatory activities before any children would be admitted early to school. The preparation would include informing the public and school staff and enlisting support, with emphasis on certain target groups in the community. The focus of the information disseminated would be on the existing evidence that early admission had been tested elsewhere and found to have favorable effects, and that the purpose of the demonstration in Warren was to study school-system wide procedures for conducting early admission rather than to experiment with children.[1] This was expected to lay the groundwork for acceptance of recommendations about children by parents and school personnel alike and to increase the likelihood that school personnel would have the background of information which would allow them to participate in the study. Fourth, the broader concept of flexible admission to and progression in school was emphasized, with early admission for mentally advanced children being a component of the broader concept. The fact was emphasized that all children would have full psychological study a year or more before admission to school. All such information could be used to improve the likelihood that all youngsters would be better understood when they entered school, whether early or at the usual time. This, it was hoped, would have a multiplier effect, since it would interest all teachers and all parents of all children, not just those selected for early admission.

The four strategies listed above did seem to have facilitating consequences. It is not possible to sort out their relative effects, but their influences were detected frequently by the staff in feedback in conversations and expressions of attitudes by teachers, parents, and others.

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[1] The notion that experimentation with children was not the focus, proved the most difficult concept to convey to the public and to other professional persons. Even though the prior experimentation done elsewhere was referred to in all presentations the idea persisted that the Warren children were being subjected to an experimental procedure.

Two other strategies seemed important, also. They were not conceptualized at the outset as significant strategies, and it could be that they would be better designated as tactics in support of the broader strategies. First, it was made clear that no pressure would be brought to bear upon parents to admit their children early. Each time a child was recommended for early admission, the parents would be fully informed of the recommendation, given opportunities to discuss it with staff members, and then encouraged to make their own decision. Second, the psychologists employed to evaluate the children and to confer with the parents were well-known and respected professional persons in the community. This meant that a certain degree of confidence was reflected upon the project by the stature of the persons who took such an important part in it.

Change Processes:

There are several possible ways to formulate statements about the change process. In this instance, the chronological sequence seems to be the most straightforward. First, the local school system, Warren, had its interest aroused in the idea. That was done deliberately and it was accomplished mainly by stimulation of local school system staff members by persons outside the school system. It is probably important that the external stimulators and the institutions they represented were respected by the Warren staff members. Second, the proposition was evaluated inside the Warren School System. The possible advantages were judged to outweigh the possible disadvantages, and the decision was made to proceed. The third step in the change process was the trial of early admission in practice. The trial benefited from the impetus built up in the first two steps. Having become interested and having decided to go ahead, the persons in authority were sufficiently involved that they were willing to spend energy in seeing that the trial was an adequate one. After the trial, the fourth step was adoption. The decision about adoption was influenced by the feedback during the trial itself.

The change process was within the Warren Schools. The actual decision about the change was not made by those who promulgated the idea. However, there is reason to believe that the continuing assistance of the University staff was a significant factor at every step, from interest arousal to adoption.

Linkage Problems:

An important problem was how to influence other school systems in the nation to change, to introduce early admission as part of a flexible admission and progression policy. The change, it was seen, could be effected in a local school system. However, it was not feasible to follow the same procedure in every school system in the nation.

The chief obstacle was the absence of any dissemination system, any established linkage between an innovating school system and other school systems. There was, to be sure, a great tangle of information networks connecting all target groups. None, however, was directly available to the demonstrators and none was really designed for and focussed on dissemination of educational innovations. Instead, they were multi-purpose systems (news agencies, radio and television networks, professional organizations). Each had its own standards for acceptance of input and its own way of selectively altering messages before and during output.

An additional problem of real significance was the control of certain information channels by persons or groups actively opposed to the innovation itself. The issue here is certainly not the right of any person or group to take an opposing position. The problem is that there are limited opportunities for the parties who differ in their views to come together to discuss their differences. An example is the attack on the Warren demonstration by well-established newspaper columnists, an attack based on limited information about the demonstration from secondary and tertiary sources. While subsequently the attackers agreed that their complaints were ill-founded, damage had already been done which could not be fully repaired by subsequent statements.

The single most serious obstacle to diffusion of information was the absence of adequate linkage systems. Of course, the mere presence of a linkage system does not guarantee its effective use. There would be problems to be solved in that connection, too. But they cannot really be dealt with until there is a linkage network available among districts, states and regions which meets suitable criteria for dissemination of educational information, including innovations.

The Fate of Innovations

The attempted innovation at Warren was successful. A program of early admission to school for mentally advanced children was adopted. Also the adoption had significant side effects such as the employment of a school psychologist and more use of psychological data about children by teachers. Further, the demonstration did achieve visibility across the nation to target audiences at which it was aimed.

Another test, however, of the success of the demonstration goes to the point of whether the presumed educational benefits actually do accrue to the children of Warren and any other school system which moved in the same direction. In this instance it is reasonable to be sanguine, for the demonstration had a rather firm basis in research, not always the case with innovations in school systems. Even so, it is advisable to continue to evaluate the specific outcomes in educational terms. Conditions do change, sometimes very subtly, and the outcomes of any procedure can be greatly altered by apparently minor changes in the conditions under which the procedure is conducted. Hence, it will be necessary to assess early admission for mentally advanced children periodically wherever it is practiced.

CONCLUSIONS AND IMPLICATIONS

Conclusions

Part of the nature of a demonstration is that it starts with conclusions and attempts to put them into practice. Further conclusions are then drawn about effectiveness and feasibility from evidence obtained during the attempted implementation.

This demonstration was based on historical data, arguments and prior research on early admission to school for mentally advanced children. It began with a three-part review of literature. An historical review analyzed the interactions of relevant forces during the chronological development of early admission practices. Next, the arguments advanced by scholars regarding acceleration in general and early admission in particular were presented. Third, the available research was reported. From all directions it was concluded that:

1. There is no research-based rationale for the present chronological age standards for admission to kindergarten or first grade.
2. School admission policies and practices need to be flexible enough to accommodate to the educational potentialities of young children.
3. Significant advantages and no deleterious effects have been reported from longitudinal research on early admission to school for children of superior intelligence who have also been screened for personal-social maturity. In these cases, early admission means admission at ages up to one year younger than the standard minimum.

Note: The conclusions stated above are the ones from which the demonstration began. However, they are restated because they were reaffirmed by the deeper and broader literature search conducted as part of the study, and they were strengthened by data from the follow-up of children admitted early to school in Warren. The conclusions drawn from the demonstration itself follow.

4. Data from the Warren, Pennsylvania project on early school entrance corroborates the generalization that the early entrant,

when properly selected, is at no disadvantage in social acceptance or in academic achievement through the first three years of school. Further, data from the Warren project show that early entrants are at no disadvantage in height, weight, motor coordination or academic achievement when compared with regular entrants of like mental capacity.

5. Teacher attitudes toward early admission as a policy were more negative than positive from the beginning to the end of the formal demonstration.

6. The information and concepts reported by teachers to be causative with respect to their negative attitudes were found to be incorrect in the light of research evidence.

7. The administrative and supervisory staff of the Warren schools was favorably inclined toward early admission as a policy and practice from the outset of the demonstration, and their position became even more favorable as the project went on.

8. The demonstration was a success in the sense that the Board of Education acted to continue it on local support after the formal demonstration support concluded.

9. The procedure used to select children for early admission proved acceptable to the psychologists, principals, supervisors and parents. With few exceptions, the same was true of teachers.

10. Teachers, supervisors and administrators were generally favorably impressed by the side effects of the demonstration resulting from the availability of educationally significant psychological data on children prior to school admission.

11. Early admission, as an educational innovation in the Warren Schools, resulted in positive changes in the way the educators viewed their jobs.

12. The change in school admissions policy and practice in Warren had only a modest impact on modifications in the activities of the school personnel. All full-time school personnel incorporated the changes into their present positions without difficulty and, in some cases, with increased job satisfaction.

13. The Board of Education, because of the consequences of the demonstration, determined to employ a school psychologist on a full-time basis.

14. Costs associated with the demonstration were considered to be within the financial capability of a school system such as Warren. In this connection, it should be noted that cost was considered to be spread over all children being studied, whether or not they were admitted early to school, because of the evident

benefits which accrued to all the children so far as the teachers, supervisors and administrators of the Warren Schools were concerned.

15. Parental reactions to the policy and practice of early admission were generally favorable whether their own children were admitted early or not. The same was true of general community reactions.

16. Dissemination of information about the demonstration was effected nationally through a wide variety of media to selected target audiences.

17. The demonstration successfully effected a change in school admission policies and practices at the demonstration site, Warren, Pennsylvania, and there is some evidence that the demonstration influenced such policies in other school districts and in certain states.

18. The Warren project was analyzed as an example of innovation and change in a local school system. Certain factors were noted which facilitated the acceptance of the innovation. Other factors were noted which tended to establish the change solidly in the policy and practice structure of the school system. These factors are not presented as necessary conditions of innovation and change, but they are judged by the project staff to be desirable conditions which assist in assuring that a new feature will be incorporated into an existing system.

    a. The innovation has a basis in previous research.
    b. The research basis of the innovation is interpreted to the persons responsible for decision-making about change.
    c. The innovation is shown to be one which can be made compatible with the existing system.
    d. A respected person inside the system promotes the innovation.
    e. The innovation is to be evaluated as to its effects and its costs.
    f. The decision-makers in the system see a way to stop the innovation process if it begins to prove unacceptable.

The general conclusion drawn from this field demonstration is that early admission to school for mentally advanced children is feasible and effective. It is a procedure which is educationally sound and it is operable in practice without difficulty. In addition, it has desirable side effects with respect to its influence upon the educational programs for all children in the school system.

Implications from the Study

Professional Preparation:

Kindergarten teachers expressed concern about how to confer with parents about problems brought to light by the preschool psychological examinations. Upper grade teachers expressed concern that they would not know what to do with early entrant children when they reached their classrooms. Psychologists, including experienced school and clinical psychologists, were unsure of themselves when confronting pre-school age children who were showing no specific problem behavior as a reason for assessment. Principals and supervisors had had no previous experience in using pre-school psychological data as an aid in planning early childhood education programs.

Such observations imply lacks in professional preparation. Perhaps some of the reluctant to accept early admission as a school practice is a result of unfamiliarity with the professional behavior appropriate under the circumstances. If so, and if early admission is to be managed well by the educators and psychologists involved, the professional preparation of teachers, supervisors, administrators and psychologists should include both didactic instruction and practicum experience to correct the deficiencies.

Sex Differences:

The Warren project reconfirmed the findings in other similar studies that girls greatly outnumber boys among children admitted early to school. The reasons for the difference have not been fully explored. It is suspected that supposed innate differences in developmental characteristics of boys and girls are not an adequate explanation. Social and cultural factors, in family and community, differences in parental and teacher expectations, the nature of the early childhood curriculum, teaching methods and teaching materials, the preponderance of woman teachers in the kindergarten and primary grades, and differences in child rearing practices are examples of possibly important nurturance considerations. It is suggested that intensive study of this phenomenon is merited, with emphasis on elements in the situation other than those which have been examined in the past.

Innovation and Change in Education:

The literature review makes clear that there has long been strong interest in making the schools flexible enough to accommodate to the acknowledged individual differences in students. It is equally clear that administrative arrangements to achieve the needed flexibility have not been widely used.

The relatively minor administrative adjustment examined in this investigation, that of relaxing the age limit for initial admission to school to encourage able younger children to start to school when ready, is but one example of the flexibility needed. It is both feasible and effective. Perhaps other administrator adjustments aimed in the same direction are equally feasible and effective.

The actual dollar cost of conducting a demonstration of this sort is not high. The direct benefits and the side effects seem to be of the order of magnitude that would justify further attempts to introduce change in local school systems. Therefore, one major implication which is drawn is that additional demonstrations of administrative change directed toward increasing flexibility in school admission and progression practices should be conducted.

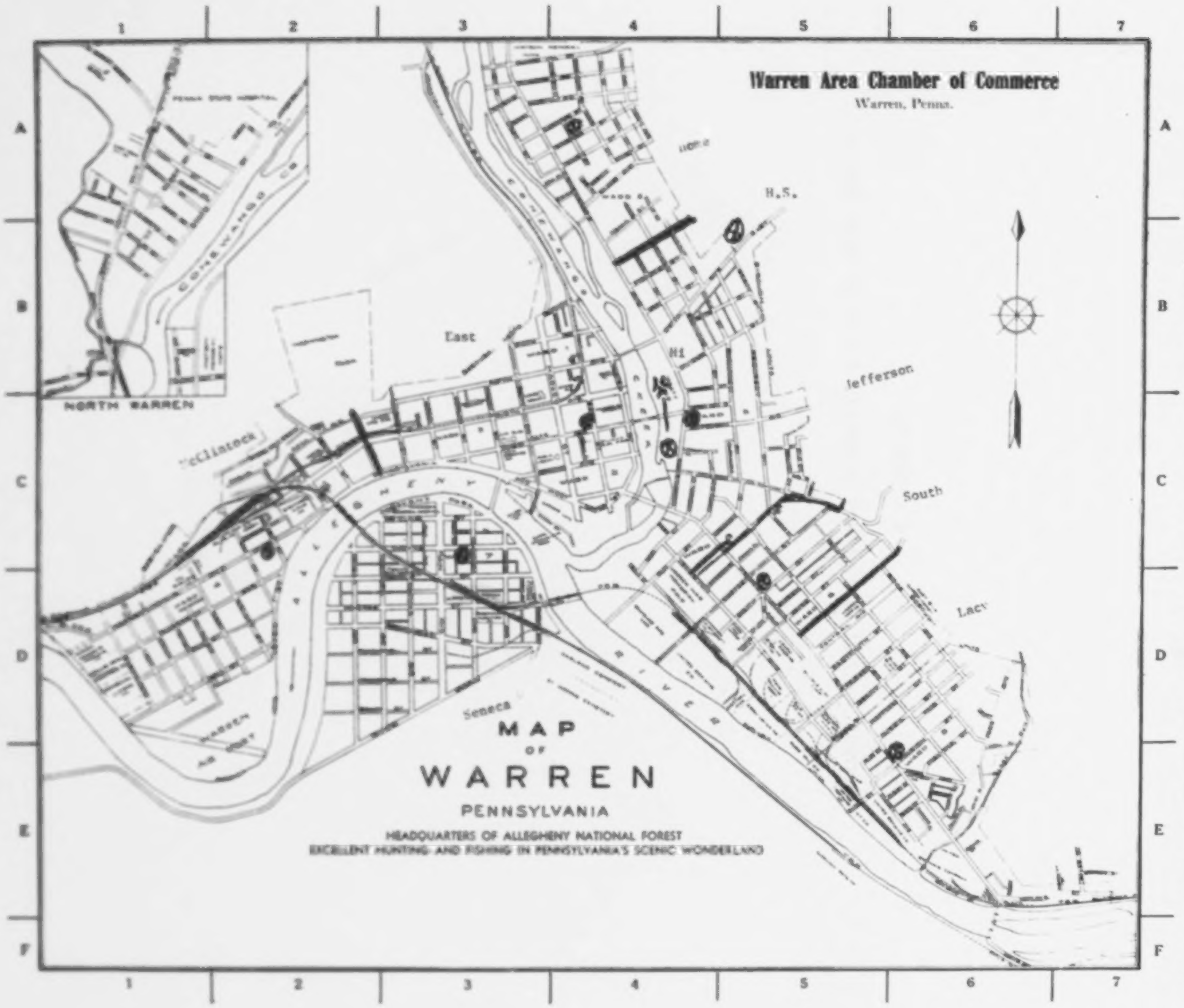
There is a suggestion arising from the work reported here that school staff members, boards of education and communities may be more amenable to change than they have been credited with being. While there are probably important subtle deterrents to change, it might be well to examine in a systematic way the more obvious ones first. One seems to be the fact that educators are kept quite busy operating the schools in conventional ways and they have little time to even consider making changes, much less to plan and to initiate them. The warmth with which the project staff from the University was received in Warren was accounted for, in part, by the planning, coordinating and operational manpower they provided for the project which was undertaken. In addition, the University project staff members found themselves welcomed as advisors and participants in a variety of other educational activities of the school system and of individual staff members. The wish was frequently expressed by local school personnel that the relationship could continue and be broadened. The implication which can be drawn is that innovation and change of the sort accomplished, and perhaps other kinds, might be brought about by an arrangement which would put University personnel in a continuing relationship with local school systems.

Another fairly obvious deterrent to innovation and change is lack of information at the local school level about what changes are desirable. The school staff at Warren was, at the outset, relatively uninformed about the successful use of early school admission as an administrative device to accommodate to mentally advanced young children. Discussions with staff members of the school system during the course of the demonstration made clear that there was real interest in learning about other practices, too, which might promise to improve the local schools. There seemed to be a general appreciation of the fact that the prevailing practices in the school system might not necessarily be the preferable practices. But there was uncertainity as to what the preferred practices might be. The implications to be drawn here are two. First, the present means of communicating information to staff members of local schools about established ways of improving their school systems do not seem to be satisfactory. Therefore, ways of upgrading the effectiveness of professional communications networks are needed. Second, it is questionable whether there are state, regional or national mechanisms for determining or reporting on preferred educational practices. If the early admission demonstration is an example, the local school administrator had really no generally accepted and widely known authoritive source to turn to to find out about it. He would have had to scour libraries to find the data and he would have to put the data together and draw conclusions himself. The same would be true of a number of other matters on which the project staff were queried. Thus, another implication is the need for a device for providing straightforward statements about the relative utility of school practices in a form easily accessible to local school personnel.

No doubt if funds, manpower and information were readily available there would remain more subtle factors which would still influence strongly the adoption of innovations. It seems likely, however, that such factors would be more amenable to identification and study if the obvious ones were eliminated. Therefore, another implication might be this: demonstrations should be stimulated after funds, manpower and information are made abundantly available to certain local school systems. Research could then be designed to draw out covert condition which influence the choice of changes and the ease of their adoption.

APPENDIX A

MAP OF WARREN


Warren Area Chamber of Commerce
Warren, Penna.
MAP OF WARREN
PENNSYLVANIA
HEADQUARTERS OF ALLEGHENY NATIONAL FOREST
EXCELLENT HUNTING AND FISHING IN PENNSYLVANIA'S SCENIC WONDERLAND
NORTH WARREN
Conewango Cr.
East
Jefferson
South
Lacy
H.S.
Seneca
McClintock
Allegheny River
1
2
3
4
5
6
7
A
B
C
D
E
F

Street Guide

Allegheny	D - 1
Alexander St.	A - 4
Alson St.	E - 6
Armstrong St.	D - 3
Averil St.	D - 6
Bauer	E - 7
Beech St.	C - 2
Biddle St.	D - 3
Brady St.	D - 2
Bradley	E - 6
Brook St.	B - 4
Bruty St.	B - 5
Buchanan St.	B - 5
Canton St.	D - 5
Carpenter	E - 7
Carver St.	D - 5
Cayuga Ave	D - 2
Cedar St.	D - 4
Center St.	B - 4
Cherry	C - 4
Chestnut St.	C - 2
Clark	C - 3
Conewango Ave.	A - 4
Conewango Pl.	C - 4
Connecticut	A - 3
Cornplanter	C - 5
Crescent Park	C - 3
Crescent St.	C - 5
Dahl St.	C - 5
Dartmouth St.	D - 5
Division St.	B - 4
Dobbins Ave	E - 5
Eagle Pl.	C - 2
East St.	C - 4
Eddy	D - 2
Edgewood Pl.	A - 4
Elk St.	C - 5
Elm	D - 4
Euclid	D - 5
Falconer	D - 1
Fifth Ave	B - 3
Fifth Ave., East	B - 4
Forest	C - 5
Fourth St.	C - 3
Frank St.	B - 4
Glade Ave.	A - 4
Glenwood	C - 5
Grant St.	D - 5
Hall St.	D - 2
Hanzer	D - 2
Hammond St.	D - 6
Harmar	D - 2
Hazel St.	C - 3
Hazeltine	E - 6
Henry	B - 3
Hemlock	E - 6
Hertzel St.	C - 4
Hill St.	A - 4
Hinkle St.	C - 5
Home St.	A - 4
Homestead Pl.	A - 3
Irvine St.	D - 5
Jackson Ave	C - 4
Jefferson Ave	C - 4
Kelrose Pl.	C - 6
Kenmore	A - 3
Lacy	D - 1
Lawn Ave	A - 4
Laurel St.	C - 3
Leroy	D - 6
Levee	D - 2
Lexington Ave	D - 4
Liberty St.	C - 3
Lincoln	D - 5
Linwood St.	D - 5
Locust	C - 6
Lookout St.	B - 4
Ludlow	D - 1
Madison	D - 5
Magee Pl.	C - 5
Main Ave.	D - 3
Malvina	E - 6
Maple St.	E - 6
Marber	E - 6
Marion	E - 6
Market St.	B - 3
McPherson St.	A - 4
Mead St.	E - 6
Melrose Pl.	C - 4
Mohawk Ave	D - 3
Monroe St.	A - 4
Morrison St.	C - 2
Muir St.	D - 6
Mulberry	A - 4
Myrtle St.	B - 4
Nesmith	A - 4
New St.	A - 4
North	E - 6
Oak St.	C - 4
Oneida Ave.	C - 3
Onondaga	C - 3
Orchard St.	B - 4
Orr	C - 4
Palm Ave.	C - 3
Park Ave.	D - 6
Park Pl.	C - 5
Parker St.	D - 5
Peach St.	D - 4
Pennsylvania Ave., East	C - 4
Pennsylvania Ave., West	D - 1
Prospect St.	B - 5
Phillip St.	A - 4
Pine St.	C - 2
Pioneer St.	B - 4
Plum St.	D - 5
Poplar St.	C - 3
Public Way.	C - 2
Quaker Hill Rd.	A - 3
Redwood St.	B - 4
Ridge Ave	D - 6
River Road	D - 3
Rollin St.	E - 6
Rosenthal St.	D - 3
Ray St.	B - 4
Ruhlman	A - 4
Russell St.	D - 5
Schane St.	C - 5
Sechriest St.	C - 2
Second Ave	C - 4
Seneca Ave	D - 2
Seventh	B - 3
Sill St.	D - 1
Sixth	B - 3
South St.	D - 5
Spring St.	C - 2
St. Clair St.	C - 3
Stone Hill Rd	C - 2
Strauther	D - 1
Stewart St.	A - 4
Swiss St.	E - 6
Terrace St.	B - 4
Third Ave.	C - 3
Third Ave., East	C - 4
Tremont St.	C - 3
Tuscarora Ave.	D - 2
Union St.	C - 2
United Ave.	D - 3
Verbeck St.	B - 4
Walnut	D - 2
Water St.	C - 4
Watson Pl.	C - 4
Wayne St.	C - 3
West St.	A - 3
Wetmore	D - 1
Whitney	E - 7
Whitley	E - 6
Willoughby Ave.	A - 3
Wilson St.	A - 3
Wood St.	A - 4

Berry St.	A - 1
Church	A - 1
Clover	A - 1
Cook	A - 1
Cottage	A - 1
Dexter Pl.	B - 1
Ditmar St.	B - 1
Follet Run Rd.	B - 1
Hazel	B - 1
Jackson St.	A - 1
Lansing St.	B - 1
Lewis St.	B - 1
Main St.	A - 1
Maple Pl.	A - 2
Park St.	A - 1
Quaker Hill Rd.	
School St.	A - 1
Shattuck Ave	B - 1
State	B - 1
Timothy Ave	A - 1
Thomas Ave	A - 1
Weatherbee St.	B - 1

APPENDIX B

FORMS USED IN EARLY ENTRANCE PROGRAM IN WARREN SCHOOLS

FORMS USED IN EARLY ENTRANCE PROGRAM IN WARREN SCHOOLS

WARREN PROJECT

Revised

PROCEDURE FOR SELECTION AND RECOMMENDATION OF EARLY ENTRANT CHILDREN

April 6, 1963

WARREN PROJECT

Procedure for Selection and Recommendation of Early Entrant Children

1. Home and school visitor sends parents letter and card informing them that their child is eligible for examination (Appendix 1).

2. Returned cards are distributed by home and school visitor to the two psychologists.

or If cards are not returned, home and school visitor contacts parents again (Appendix 2).

3. Psychologist calls parent and arranges appointment.

4. Psychologist interviews parents and examines child.

or Psychologist notifies home and school visitor of parents who fail to keep appointment. Home and school visitor contacts parents again.

5. Children Not Recommended

   a. Psychologist informs parents that child will enter kindergarten at the normal time, answers questions and gives parent Information Sheet A (Appendix 3).

   b. Psychologist dictates report containing recommendation and mails it to the project office at the University of Pittsburgh where it is typed and forwarded to the home and school visitor.

   c. Letter sent to parents from the superintendent's office (Appendix 4).

6. Children Recommended for Retest

   a. Psychologist informs parents that his assessment has been inadequate and suggests a further interview by the other project psychologist.

   b. This information is passed to the home and school visitor in the psychologist's report.

   c. Letter sent to parents from superintendent's office recommending further interview with the other psychologist in March or April. (Appendix 5).

   d. Home and school visitor calls parent in March to determine if agreeable to re-examination and arranges for alternate psychologist to make new appointment.

   e. Psychologist, on home and school visitor's advice, calls parent and arranges new appointment.

7. Children Provisionally Recommended as Result of Psychological Testing

a. Psychologist informs parents:

i) that to complete the over-all assessment it will be necessary for the child to spend an hour or an hour and one-half during March in the nearest kindergarten,

ii) that the home and school visitor will inform them of the kindergarten, the date and the session for the observation visit, and

iii) that no decision or recommendation will be made on any children until the committee meets following these visits. Psychologist gives parents Information Sheet A (Appendix 3).

b. Provisional recommendation passed to home and school visitor in psychologist's report.

c. Home and school visitor calls to arrange visit with appropriate kindergarten teacher and notifies parents by letter (Appendix 6) two weeks before date of appointment of the date, kindergarten, and session. (Copy of letter to be sent to kindergarten teacher.)

d. Kindergarten teacher observes child and tells parents that committee will make decision and notify her within two weeks.

e. The committee is to consist of the psychologist and kindergarten teacher who have observed the child under consideration and a representative of the school superintendent who shall be the chairman. Where there is agreement between the psychologist and the kindergarten teacher it should not be necessary for the committee to meet physically, but the agreement in recommendation should be communicated to each member by the chairman over the telephone. Where there is a borderline recommendation made by either the psychologist or the kindergarten teacher or where there is disagreement between the recommendations, the chairman should call the members of the committee together for discussion. If final agreement cannot be reached by this committee, the chairman should consult other resource persons from the school system or phone a staff member of the project at the University of Pittsburgh for consultation.

f. Kindergarten teacher reports to committee chairman (Appendix 7).

g. Committee chairman consults with committee members.

h. Chairman advises superintendent of committee's recommendation.

i. Superintendent sends letter to parents informing them that child's needs will be met most satisfactorily by entry into kindergarten at the usual time (Appendix 4).

or Superintendent sends letter (Appendix 8) to parents recommending early admission to kindergarten and Information Sheet B (Appendix 9).

j. Parents' replies (acceptance/non-acceptance) collated by home and school visitor.

3-6-63

APPENDIX 1

SCHOOL DISTRICT OF WARREN BOROUGH
Warren, Pennsylvania

Carl E. Whipple
Superintendent

Dear Mr. and Mrs.________________:

According to the school census records your child______________ would be old enough to begin kindergarten in September, 196_. We are writing you now, though, because again this year we plan to recommend that some children begin kindergarten a year before the usual time. We have arranged for our school psychologists to examine all children who would ordinarily go to kindergarten in September of 196_. These children were born between December 1, 195_ and November 30, 195_, inclusive. The examining will be done this fall and continue through winter and spring, beginning with the older children. There will be no charge for this service.

One of the psychologists will telephone you to arrange an appointment, and it will be possible to have appointments during the week in the late afternoons, evenings, or anytime Saturday. He will also let you know where the examination will take place.

Please return the enclosed card with the information requested, and you will be called to arrange the appointment.

You will be informed about what the psychologist's examinations can tell about your child. If your child is recommended for early entry to school, you may decide whether or not you wish to follow the recommendation, and the decision will be up to you entirely.

We are convinced that the practice of studying all of Warren's children in their early years before they attend school will have very beneficial results. We appreciate your co-operation in this matter as we do in all matters affecting your children's schooling.

Sincerely,

Carl E. Whipple
Superintendent

CEW/sec

(Sample - Return Card)

____

____
Parents or Guardian

____
Address

Telephone	Name of Child
Birthdate of Child	Name of Family Physician

When is it best to telephone you? Morning ________
Afternoon________
Evening________

PLEASE complete and return this card in the enclosed envelope.

APPENDIX 2

SCHOOL DISTRICT OF WARREN BOROUGH
Warren, Pennsylvania

Carl E. Whipple
Superintendent

Dear Mr. and Mrs.______________:

According to the school census records your child, _____________ would be old enough to begin kindergarten in September, 1964. Again this year we plan to recommend that some children begin kindergarten a year earlier than the usual time.

In the fall we mailed you a card requesting information necessary to this plan but, as yet, we have not received your reply. Please return the enclosed card with the information requested, and you will be called to arrange an appointment with our school psychologist.

We hope that our school psychologists will examine all children who would ordinarily go to kindergarten in September 196_. These children were born between December 1, 195_, and November 30, 195_, inclusive. The examining is now being done and will continue through the spring. There will be no charge for this service.

One of the psychologists will telephone you to arrange an appointment, and it will be possible to have appointments during the week in the late afternoons, evenings, or anytime Saturday. He will also let you know where the examination will take place.

You will be informed about what the psychologist's examinations can tell about your child. If your child is recommended for early entry to school, you may decide whether or not you wish to follow the recommendation, and the decision will be up to you entirely.

We are convinced that the practice of studying all of Warren's children in their early years before they attend school will have very beneficial results. We appreciate your co-operation in this matter as we do in all matters affecting your children's schooling.

Sincerely,

Carl E. Whipple
Superintendent

CEW/sec

APPENDIX 3

SCHOOL DISTRICT OF WARREN BOROUGH
Warren, Pennsylvania

Carl E. Whipple
Superintendent

INFORMATION FOR PARENTS:

We appreciate that you have arranged to have a psychological assessment at this time for your child. It will be very useful when he enters kindergarten. Parents know that children of the same age differ in learning capacity just as they differ in physical attributes such as height, weight, and strength.

Among a representative group of five year old children there are some whose capacities to learn will be more like that of a six or seven year old. Others will have learning capacities more like those of a four year old. These children, the average, the mentally advanced, and the mentally retarded, will be ready for school learning at different ages and will learn at different rates. Although this information is not as widely known as it should be, it is amply supported by evidence from research.

The Warren project on early admission of mentally advanced children to school is concerned with the problem of adapting to the variations of readiness for learning shown by different children. Since children reach readiness for formal instruction at different ages, it seems logical that they should be admitted at different ages, --whenever they are ready. Children rated as mentally advanced will be recommended for early entry to kindergarten. The majority, of course, will be of average ability and will be admitted at the usual time.

The information obtained from the psychological examinations will be of considerable value to the kindergarten teacher when your child enters school. As a result of having the psychological report, the teacher will know a great deal about the child's learning capacity before he arrives at school and will be better prepared to meet his particular needs in the social and the more formal learning situations.

If you have other questions about your child's learning, you are welcome to talk with Mr. Harry Danielson (Ra. 3-6900) to arrange an appointment to discuss them.

Sincerely,

Carl E. Whipple
Superintendent

IS:A
CEW/sec

APPENDIX 4

SCHOOL DISTRICT OF WARREN BOROUGH
Warren, Pennsylvania

Carl E. Whipple
Superintendent

Dear Mr. and Mrs.______________________:

Our school staff has been very pleased at the opportunity to get to know your child,___________, during the process of considering children for possible early admission to kindergarten. After most careful consideration, we feel that ________'s best interests will be served by entering kindergarten at the usual time in the fall of 196_.

Should you wish to discuss our recommendations on this matter, you can arrange an appointment at a convenient time by calling Mr. Harry Danielson at Ra. 3-6900.

Your co-operation has been most helpful. The information we now have on ____________'s social, emotional, physical, and intellectual development will be useful to his/her kindergarten teacher when he/she begins school.

Sincerely,

Carl E. Whipple
Superintendent

CEW/sec

APPENDIX 5

SCHOOL DISTRICT OF WARREN BOROUGH
Warren, Pennsylvania

Carl E. Whipple
Superintendent

Dear Mr. and Mrs. ______________:

You will know from your discussion with the psychologist who examined your child that he gathered a considerable amount of information during the recent interview. However, the psychologist feels he did not get an adequate measure of your youngster's ability. He would like the opportunity to examine the child further and suggests that the other project psychologist might be asked to interview him for this purpose.

The decision on whether to enter him early into school is an important one. We wish to be as certain as possible before deciding on any recommendation.

If you are agreeable to another examination, this will take place during March or April. Mr. Harry Danielson, the home and school visitor, will contact you during March to arrange for a new appointment.

Sincerely,

Carl E. Whipple
Superintendent

CEW/sec

APPENDIX 6

SCHOOL DISTRICT OF WARREN BOROUGH
Warren, Pennsylvania

Carl E. Whipple
Superintendent

Dear Mr. and Mrs.____________:

In connection with the early kindergarten admission program, we should like to have your child,___________, visit at the _______School kindergarten for an hour on____________morning/afternoon at__________ o'clock. The visit will give the kindergarten teacher a chance to meet your child and observe him/her in a group before she meets with the committee which will later make final recommendations for entry next year.

We recognize that on this visit the situation will not be a normal kindergarten situation for your child, but we hope it will be useful in considering his/her readiness for school. (The regular kindergarten visiting days for next year's children are entirely separate from this and will occur in May.)

If it is impossible for your child to come on this date, please phone the teacher before or after school hours to see if she can arrange another date. Phone__________. Please leave your child and call for him at_______.

Visitors are usually more relaxed if they are not especially dressed up for the occasion. Also, your child may find such a large group a little overwhelming, so we suggest you be careful not to raise his expectations of a good time because he might then be unnecessarily disappointed.

You realize, I believe, that a committee of psychologists, supervisors, and kindergarten teachers will meet later to arrive at a final decision regarding whether or not your child will be recommended for early entrance.

You will be notified as soon as possible, by a letter from the superintendent, whether or not your child is recommended for early admission. At that time, if your child is among those recommended, you will be asked to indicate whether you wish to accept it.

Sincerely,

Carl E. Whipple
Superintendent

CEW/sec

APPENDIX 7

KINDERGARTEN REPORT FORM

YOUR CHILD AS AN INDIVIDUAL

O. Outstanding
S. Satisfactory
I. Improvement Needed

PRE-READING ______
Needs help with:
Recognizing colors ______
Telling what is happening in pictures ______
Telling of stories ______
Ability to follow directions ______

SELF-EXPRESSION ______
Needs help with:
Speaking in sentences ______
Expressing ideas clearly ______
Taking part in group discussions ______
Using an increasingly larger vocabulary ______

NUMBER WORK ______
Needs help with:
Understanding how numbers are in daily living ______
Counting objects ______

RECORD OF ATTENDANCE
SCHOOL YEAR 19__ to 19__

Days Present ____________

Days Absent ____________

Times Tardy ____________

COMMENTS

Teacher's Comments: ____________

____

____

____

____

(continued on next page)

APPENDIX 7 (cont.)

ame________________________________

WARREN BOROUGH SCHOOL DISTRICT
Warren, Pennsylvania

Kindergarten Report Card

To The Parents:

We want to work with the home in guiding the development of the child so that he may live successfully as an individual and as a member of society.

The report card for the kindergarten stresses mental and social development. It indicates how the home may help the child to improve group living, physical development, personal habits, and effort in school work. The report also shows the child's progress in school subjects for his grade.

____
chool

____
eacher

chool Year 19__ to 19__.

YOUR CHILD AS A MEMBER OF A GROUP
O. Outstanding
S. Satisfactory
I. Improvement Needed

	Year's Report
GROUP LIVING	________
Needs help with	
Getting along with others	________
Listening	________
Developing Self-Confidence	________
Keeping busy in free periods	________
Respecting other's opinions	________
Often volunteers to talk, sing, or act in the group	________
PHYSICAL DEVELOPMENT	________
Needs help with:	
Developing large muscles skills through running, hopping	________
Developing eye and hand skill by coloring, pasting, cutting	________
PERSONAL HABITS	________
Needs help with:	
Being courteous	________
Managing own wraps and belongings	________
Willing to wait his turn	________
Obeying	________
WORK HABITS	
Needs help with:	
Working neatly	________
Finishing work satisfactory	________
Concentrating	________
Working without special help	________
CONDUCT	________

APPENDIX 8

SCHOOL DISTRICT OF WARREN BOROUGH
Warren, Pennsylvania

Carl E. Whipple
Superintendent

Dear Mr. and Mrs.________________:

After most careful consideration your child,__________, has been recommended for admission to kindergarten in September, 196_. In the best judgment of our school staff, including the home and school visitor, the school psychologist, the kindergarten teacher, and the director of elementary education, ________should go to kindergarten this fall rather than wait another year.

If he enters this fall, he will be part of the class which goes on to first grade next fall, and he will continue with that group. He will attend_____________School. There will probably be other early beginners near__________'s age in the same class. But even if there were not, we feel that he would fit in very well because of his generally superior development. In short, it is our judgment that he is ready for kindergarten, and he should have the opportunity to attend. We have every reason to believe that he will do as well or better in school now and in the future than he would if he were to wait another year for admission.

I am sure you recognize that we are making this recommendation in what we believe to be ___________'s best interests. The enclosed information sheet we hope will help you make your decision on early entry. If you would like to discuss it further, please feel free to call Re. 3-6900 and talk with Mr. Harry Danielson, Home and School Visitor.

Please return the enclosed card to let me know of your intentions. Thank you.

Sincerely,

Carl E. Whipple
Superintendent

CEW/sec
Enclosures 3

(Sample - Return Card)

____
Name of Child CHECK ONE

I agree with your recommendations
for admission to kindergarten this
fall for my child. ______________

I prefer that my child enter
kindergarten at the usual time
in the fall of 196_. ______________

________________________________ ______________
Signature of Parent Date

APPENDIX 9

SCHOOL DISTRICT OF WARREN BOROUGH
Warren, Pennsylvania

Carl E. Whipple
Superintendent

INFORMATION ON EARLY SCHOOL ENTRY FOR MENTALLY ADVANCED CHILDREN

1. Is early school admission of mentally advnaced children a new idea or has it been tried previously?

Early admission as a form of acceleration for mentally advanced children has been tried in a small number of areas scattered throughout the nation. Only in Warren has there been systematic examination of the complete pre-school group due to enter kindergarten in the following September. An interesting summary of some other early entrance schemes will be found in a booklet entitled EARLY SCHOOL ADMISSION FOR MENTALLY ADVANCED CHILDREN. It can be obtained from the Council for Exceptional Children, 1201 Sixteenth Street, N. W., Washington 6, D.C. The price is $2.00.

2. What are the advantages?

Dr. Dean Worcester, in his book THE EDUCATION OF CHILDREN WITH ABOVE AVERAGE MENTALITY (1956), summarized the potential advantages of early admission as supported by research as follows:

"1. Early entrance has the advantage of any other form of acceleration in that it saves a year of the pupil's life. If there be no further acceleration, the child has the regular number of years of education with all the possibilities of enrichment and still can enter college, and, after that, post-college training at an earlier age. For very many of these bright children, the extra year will be spent in advanced education in order to prepare for the exceedingly complex tasks of the professions, technology, business and government.

2. The child will be placed from the beginning with those more nearly his mental and social equal and will therefore be less likely to develop habits of dawdling and laziness.

3. His education will be directed. In some homes, to be sure, the mentally ready child who has to 'sit and wait' will have the advantage of enlightened home training. For many, it will be haphazard.

4. The problem of skipping material in the curriculum is obviated.

5. Teachers are made more aware of the particular needs of the bright children by recognizing them at the beginning of their school careers.

6. The school system as a whole becomes sensitive to the problem of the gifted."

3. What are the negative factors likely to affect normal or accelerated development of children in early entrance programs?

Emotional, social, and physical immaturity are frequently said to have an adverse effect on the progress of early entrance children (and children accelerated in other ways also) either at time of entry or later when they reach high school or college. However, if the children have passed through an adequate selection procedure designed to assess the over-all development of the whole child, not just his intellectual capabilities, and if recommendations for acceleration are made on the basis of over-all maturity, then the children recommended for early entrance should not usually have difficulties in adjusting socially, emotionally, or physically. Reading the literature on failure in accelerated programs suggests that poor initial selection is the most important causal factor.

You will be aware that in Warren two highly competent, experienced psychologists, using multiple criteria (tests and observations); skilled kindergarten teachers, thoroughly accustomed to observing children's behavior; and a committee of professional educators are involved in screening those children who seem capable of benefiting from kindergarten experience. By this means potential failures are as far as possible eliminated from the early entry group.

4. What will happen if a child fails? How can he and his parents be protected from loss of face?

For reasons indicated above, failures are not anticipated. If for any reason a child should not make adequate grades, his case would be reviewed by the selection committee and any remedial measures felt necessary discussed with the parents.

5. What would be the effect on individual children of abnormal publicity as a result of participation in the project?

The staff responsible for the project are aware of the possible consequences of abnormal publicity and have made strenuous attempts to keep the public spotlight off individual children. Parents will be aware that in press and radio releases on the Warren project children's names are never mentioned. This applies also to papers read at professional meetings. Press and journal photographers have been refused permission to photograph groups containing early admitted children and kindergarten teachers do not identify them for anyone not intimately connected with the project.

Parent interviews revealed that except in one area where a number of the children were neighborhood playmates parents had little idea of who the selected children were outside of their own school and often not even within it. Similarly, among the grade teachers in a school the fact that their kindergarten was participating was known but frequently not the names of the individual children. As far as it has been possible to determine to date the other children in the classes rarely, if ever, know who the early entrants are. Dr. James Hobson, writing about early entrants in the Brookline, Massachusetts schools, says that the younger children are soon forgotten as being anything different from others in the class.

6. Will they go early to grade one?

Yes. Once they have been admitted to kindergarten, they will move ahead as other members of their class governed by the normal regulations and procedures.

7. When will they be taught reading, writing, and arithmetic?

They will be observed along with all the others in the class for indications of readiness for learning these skills. The teacher will be on the alert to meet their individual needs when they arise, and this may in a few cases necessitate minor adjustments to the usual program. This has already happened in isolated cases, both within and withour the program. The school curriculum is sufficiently flexible to adjust to these differences, both in scholastic advancement and retardation.

8. What will happen to an early entrant if he moves into another education district which has no early entrance program?

The Warren Board of Education will furnish the new board and the parents with a letter indicating that the child has participated in the program and ask that this be taken into consideration in placement in the new school. Naturally, the subject grades will play the major part in any new placement.

9. When will this project come to an end, and what will happen to these children then?

The Warren project does not fall into the type of investigation normally labelled as "experiment." Experiments conducted over the last quarter century on large and small laboratory and field groups have produced evidence. (unfortunately not adequately publicized nationally), which shows that early admission for carefully selected, highly able (not just high IQ) children is advantageous to their scholastic and personal development. The Warren project aims to demonstrate that a school system is able to initiate and operate a systematic assessment and selection procedure for all children in the area in the appropriate age range, and where necessary, to modify its administrative, organizational, and instructional practices to cater to a small number of younger, highly able children in a typical classroom.

In its initial stages the Warren schools are being assisted by the University of Pittsburgh School of Education with support from the United States Office of Education, Co-operative Research Branch. It is hoped that once a satisfactory procedure has been worked out, early entrance for a small number of children will become a regular part of the established school pattern. This will depend not on the "researchers" but on the community and the Warren Board of Education on whose approval the continuation of the operation rests.

SUMMARY

Early admission to school is advantageous for some children. Those in Warren who will profit from it are being located and recommended to make an early start in kindergarten. The staff of the schools and the early entrance project are thus improving the opportunity for Warren's highly able children to make the maximum use of the educational facilities available to them. It is hoped that a pattern is being developed which will become a part of the regular school system.

Sincerely,

Carl E. Whipple
Superintendent

IS:B
2-11-63
sec

APPENDIX C

CHECK-SHEET FOR SOCIAL AND EMOTIONAL STATUS OF CHILD

CHECK-SHEET FOR SOCIAL AND EMOTIONAL STATUS OF CHILD

________________________________ TEST BEHAVIOR Form 2/62
(Name)

Willingness	enthusiastic eagerness	enters actively into task	normal attitude because proper	disagreeable task	active objection
Self-Confidence	extremely self-confident; relies on own ability	rather self-confident	neither distrustful nor entirely self-reliant	inclined to distrust own ability	extremely lacking in self-confidence; constantly distrustful of own ability
Social Confidence	perfectly assured in personal contacts	rather confident	normal for age	rather shy	shy reserved reticent
Attention	completely absorbed by task	little interference from distracting stimuli	normal; attention to outside stimuli does not impair efficiency	easily distracted by extraneous stimuli or by own ideas, but returns readily to task	abstracted; difficult to get and hold attention

	Below	Average	Above	Example of Behavior
	1 2	3	4 5	
Level of Motor Activity				
Level of Social Activity				
Level of Verbal Activity				
Evidence of Anxiety				
Evidence of Independence				
Evidence of Security				
Evidence of Aggression				
Evidence of Fear				
Other				
Over-all Impression of Emotional Development				

APPENDIX D

DEVELOPMENTAL HISTORY DATA SHEET

DEVELOPMENTAL HISTORY DATA SHEET

Form 1/62

INFORMATION SHEET

Full Name of Child____________________

Birth Date____________________

Sex____________________

Interviewer____________________

Date of Interview____________________

Child's Address____________________

____

____

Telephone____________________

Mother's Name (or Guardian)____________________

Mother's Occupation____________________

Mother's Religion____________________

Father's Name____________________

Father's Occupation____________________

Father's Religion____________________

Mother's Schooling____________________

Father's Schooling____________________

Person(s) Furnishing Information____________________

____

Birth Certificate____________________

Nearest Elementary School____________________

Mother's Birth Place____________________

Father's Birth Place____________________

Mother's National Descent____________________

Father's National Descent____________________

Child's Height

Child's Weight

Size of Family

Ages, Names and Sex of other Children

Does Child Attend Nursery School?

Does Child Attend Church School?

Does Child Play with other Children?

Does Child Stay with Adult other than Parent at Any Time?

What is Child's Favorite Toy? Second?

What is Child's Favorite Pastime? Second?

Current State of Health

Recent Illnesses

Past Illnesses

Operations

What Problems Does Parent Have With Child?

Hearing Functioning

Vision Functioning

Child's Interest in Reading

Other____

Form 1/62
Warren Project
Department of Special Education and Rehabilitation
School of Education
University of Pittsburgh

1-8-62

APPENDIX B

CHILD BEHAVIOR WARREN KINDERGARTEN TEACHERS CONSIDERED DESIRABLE INDICES FOR EARLY ADMISSION

CHILD BEHAVIOR WARREN KINDERGARTEN TEACHERS CONSIDERED DESIRABLE INDICES FOR EARLY ADMISSION

Able to follow directions from school patrol officers.

Free of speech problems; reasonably clear speech for age.

Eagerness to go to school.

Lacking fear; possess self-assuredness.

Show sense of responsibility.

Able to follow simple directions.

Talk at same length on one subject.

Able to finish what is started.

Able to speak up on own.

Talk in sentences.

Tell things in sequence.

Able to put on own clothing to go out-doors.

Able to use scissors for cutting.

Able to draw with firm lines.

Able to keep in mind what is being drawn.

Able to quickly learn to button and use zippers.

Able to manipulate large puzzles.

Take competition without excessive frustration.

Able to listen to directions and take turn.

Able to count to five.

Shows independence from mother.

Knows some songs or rhymes.

Makes representation of drawings.

Pays attention for ten to fifteen minutes to items of interest for age level.

Have ability to generalize.

At least average physical size and coordination for kindergarten.

APPENDIX F

SUGGESTIONS BY PSYCHOLOGISTS FOR ASSISTANCE TO KINDERGARTEN TEACHERS WHEN OBSERVING A CANDIDATE FOR EARLY ADMISSION AND DISCUSSING THE CHILD WITH THE PARENT

SUGGESTIONS BY PSYCHOLOGISTS FOR ASSISTANCE TO KINDERGARTEN TEACHERS WHEN OBSERVING A CANDIDATE FOR EARLY ADMISSION AND DISCUSSING THE CHILD WITH THE PARENT

A. The Child:

1. Note the ease with which the child leaves the parent.
2. Have a personal interview with the child, perhaps just a few moments aside in the classroom to get a feel for the youngster's reaction.
3. Check the child out on your own criteria. Each kindergarten teacher has some approach which she likes to use with new children. Use this approach with this child and observe his reactions.
4. Observe the child with the group, although you should expect a certain amount of shyness and possibly even uneasiness on the child's part.
5. Observe the child as he works with usual kindergarten materials and equipment.
6. Keep in mind in all your observations that the child is a newcomer.
7. Note need for toileting if it is necessary.
8. Review the standard report card for characteristics to observe.

B. The Parent:

1. Ask the parent to tell you what she wishes about the child.
2. Tell the parent the teacher is an observer in this situation; define your role as the parent understands it.
3. Have a brief talk with the parent before observing the child, indicating that no decision will be made at this time. Don't allow yourself to be put on the spot as to whether or not the child will go to kindergarten early.
4. Let the parent know that this is an opportunity for the parent to make a brief observation of the kindergarten, too.

APPENDIX C

INTERVIEW SCHEDULE - ADMINISTRATIVE AND SUPERVISORY PERSONNEL

INTERVIEW SCHEDULE - ADMINISTRATIVE AND SUPERVISORY PERSONNEL

One of the reasons for this visit to Warren is to interview the administrative and supervisory personnel. The purpose of this interview is to determine the extent to which your job has been modified as a result of the early admissions program. (For kindergarten only - Although you are not ordinarily considered as part of the administrative staff, I think we can assume that you have certain administrative responsibilities to the early admissions program.)

Every member of the administrative and supervisory staff has some involvement in the early admissions program - I'm interested in your particular role.

(For the Superintendent - I recognize that you have total responsibility - I'd like you to consider here those specific responsibilities that you have taken for yourself.)

I'd appreciate it if you'd think about this past year as you consider each of my questions, especially as they concern,

a. your specific responsibilities
b. the amount of time involved in each of these activities (if not offered, the interviewer should press for specific response concerning time)

For the Superintendent and assistant superintendent

1. What additional time or changes in your use of your time directly associated with the early admission program were required by:

    a. conferences with the demonstration project staff
    b. conferences or meetings with school staff

        1. formal
        2. informal

    c. interviews or conferences with parents or candidates for early admission

        1. formal)
        2. informal) Both before and subsequent to school entrance

    d. meetings with the committee on recommendation for early school admission

    e. interviews and conferences with other members of the community

        1. formal
        2. informal

    f. research of school law

    g. preparing for school board meetings

   h. preparing school budget

   i. recruitment of personnel

   j. conferences with educators from outside the school system

   k. preparing publicity releases

   l. correspondence

2. In what other ways has your position as (assistant) superintendent been modified as a result of the early entrance program?

3. What amount of clerical assistance did you require concerning your early entrance activities?

For the Director of Elementary Education

1. What additional time or changes in your use of your time directly associated with the early admission program were required by:

   a. conferences with the demonstration project staff

   b. conferences with the administrative and supervisory staff

      1. formal
      2. informal

   c. interview or conferences with teachers and principals

      1. formal
      2. informal

   d. interviews or conferences with parents of candidates for early admission

      1. formal)
      2. informal) Both before and subsequent to school entrance

   e. interviews and conferences with other members of the community

      1. formal
      2. informal

   f. meetings with the committee of recommendation for early school admission

   g. administration and/or supervision of the testing program (other than pre-school psychological exam)

   h. conferences or interviews with educators from outside the school system

   i. preparing publicity releases

j. classroom supervision

k. direct contact with children

l. correspondence

2. In what other ways has your position as Director of Elementary Education been modified as a result of the early entrance program?

3. What amount of clerical assistance did you require concerning your early entrance activities?

For the Home and School Visitor

1. What additional time or changes in your use of your time directly associated with the early admission program were required by:

   a. pre-school census

   b. correspondence with parents concerning pre-school psychological examination

   c. scheduling psychological examinations

   d. direct contact with the psychologists

   e. conferences with the demonstration project staff

   f. conferences or meeting with the administrative and supervisory staff

      1. formal
      2. informal

   g. conferences or interviews with teachers and principals

      1. formal
      2. informal

   h. meetings with the committee of recommendation for early school admission

   i. interviews or conferences with parents of candidates for early admission

      1. formal) Both before and subsequent to school
      2. informal) entrance

   j. interviews and conferences with members of the community

      1. formal
      2. informal

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k. administration or supervision of the testing program (other than pre-school psychological exam)

l. direct contact with children

m. conferences or interviews with educators from outside the school system

n. correspondence

2. In what other ways has your position as Home and School Visitor been modified as a result of the early admission program?

3. What amount of clerical assistance did you require concerning your early entrance activities?

For Principals and Kindergarten Teachers

1. What additional time or changes in your use of your time directly associated with the early admission program were required by:

a. kindergarten visitations of early entrance candidates

b. recording observations of kindergarten visitations

c. preparing recommendations for candidates

d. conferences or interviews with the demonstration project staff

e. conferences or interviews with the administrative or supervisory staff

   1. formal
   2. informal

f. conferences, interviews or discussions with parents of candidates for early admission

   1. formal
   2. informal

g. interviews and conferences with other members of the community

   1. formal
   2. informal

h. administration or supervision of the testing program (other than pre-school psychological exam)

i. meetings with the committee of recommendation for early school admission

   - j. in study of individual psychological reports on children

   - k. (for principals) classroom supervision

2. In what other ways has your position as (kindergarten teacher) principal been modified as a result of the early admission program?

3. Did you require clerical assistance?

   - a. how much clerical work did you do yourself?

   - b. how much did you have done for you?

For all Interviewees

I'd like to return sometime within the next two days in case there is something we've overlooked. If by chance we miss each other, and you think of something that we didn't cover, I'd appreciate it if you'd drop me a letter.

APPENDIX H

QUESTIONNAIRE FOR TEACHERS ON ATTITUDES TOWARD EARLY SCHOOL ADMISSION FOR MENTALLY ADVANCED CHILDREN

QUESTIONNAIRE FOR TEACHERS ON ATTITUDES TOWARD EARLY SCHOOL ADMISSION FOR MENTALLY ADVANCED CHILDREN

Directions: Please circle response or write in the space provided.

1. What was your attitude towards the proposal to admit mentally advanced children early to kindergarten when you first heard of it?

   highly favorable   favorable   neutral   unfavorable   highly unfavorable

2. Please state the main factors which caused you to have positive feelings towards the project and those which led to negative feelings.

   positive: ____
   ____

   negative: ____
   ____

3. What is your present attitude?

   highly favorable   favorable   negative   unfavorable   highly unfavorable

4. If you have indicated a change in attitude, which factors, positive or negative, caused the change?

   positive: ____
   ____

   negative: ____
   ____

5. Would you like to receive a summary of the responses to these questions? _____

6. Please check the level at which you have most of your professional teaching experience.

   Kindergarten-Primary (K-3) _____   Junior High School (7-9) _____
   Intermediate (4-6) _____   Senior High School (10-12) ___

APPENDIX I

GUIDELINES AND ANALYSIS SHEET FOR FOLLOW-UP PARENT INTERVIEWS

AND

ANALYSIS OF PARENT INTERVIEWS

GUIDELINES AND ANALYSIS SHEET FOR FOLLOW-UP PARENT INTERVIEWS

1. How do you feel __________________ is getting along at school? Do you have any regrets regarding the decision you made to enter him/her early?

2. What thoughts or attitudes did you have towards early admission before __________ was recommended for early admission, that is between the time of the initial publicity and your personal involvement when you received the letter of recommendation?

3. Had you already made up your mind what to do before the letter of recommendation arrived?

4. What were the various factors that influenced your decision? For? Against?

5. In coming to your decision presumably you discussed the recommendation with a number of people. Would you mind identifying them by their profession or relationship to you? Did you have any particular reason for asking the opinion or advise of any of these people?

6. Could you indicate which of the factors carried the most weight? For? Against?

7. Did you have any thoughts on the long term effects of early admission? Effects of graduating early from high school and college? Of your child being a year younger than his classmates at adolescence, etc?

8. While no one can predict the future with any degree of accuracy, most parents have some views about what their children might be or what they would want them to be. Have you thought what kinds of occupations you might want your child to be involved in as an adult?

9. In the same vein what thoughts have you had about advanced education for ________________?

10. I gather that some people are able to make financial provisions for their child's education. Have you thought of doing this?

11. Sometimes a change in behavior is noticed by parents when a child begins school. Have you been aware of any differences in ___________ behavior since she began school? If so, what form did the change take?

12. Could you describe the interest ________________ has shown in reading at home: How much reading do you do for him/her? When did this story reading begin? Does he/she belong to a library?

13. What are your reading interests?

14. Curiosity is an expected part of children's behavior. Would you consider _____________ to be a particularly curious or inquisitive child? Could you give me two or three examples of her behavior illustrating this curiosity at home or otherwise?

15. These days one frequently hears comment on strict versus lax methods on rearing children. Would you care to indicate whether you feel you follow the permissive or the authoritarian approach, or which side of the mid-position you think you fall. Would you mind indicating how you would handle: a. a refusal to eat at mealtime; b. toilet training; c. deliberate disobedience of a request not to do something. If not already indicated, what is your attitude towards punishment?

16. (For parents of girls) If _______________ had been a boy would this have effected your decision on early entrance?

ANALYSIS OF PARENT INTERVIEWS

1. Child's adjustment (present) to school:

1	2	3	4	5
excellent	______	Satisfactory	______	poor

2. Parents' present feeling about admission decision:

1	2	3	4	5
very satisfied	______	______	______	very dissatisfied

3. Parents' attitudes towards project when first announced (before personal involvement):

1	2	3	4	5
favorable	______	______	______	unfavorable

4. Decision made before receipt of letter of recommendation: 1-yes 2-no

5. Decision discussed with:
1-psychologist 2-school personnel 3-physician
4-family 5-friends

6. Reasons for sending: Against sending
1. 4.
2. 5.
3. 6.

7. Which reason carried most weight.

8. Any concern about long-term effect of early admission 1-yes 2-no

9. Problems anticipated:
1-too early graduation from high school and/or college
2-adolescent social problems from being youngest in group
3-difficulties in obtaining employment
4-other

10. Possible occupation or profession: 1.
2.
3.
4.

11. Plans for advanced education: 1-none as yet
2-interest but no funds
3-actually saving

12. Any change in child's behavior:

1	2	3	4	5
positive		none		negative

13. Modification noted as:
positive 1. negative 6.
2. 7.
3. 8.

14. Interest in reading at home:
1 2 3 4 5
great interest ______ no interest _____ great dislike

15. Reading by parents to children:
1 2 3 4 5
regularly ________ occasionally ________ none at all

16. When did story-reading begin:
1.
2.
3.

17. Child belongs to and uses library:
1-regularly
2-occasionally
3-does not belong

18. Parents' reading interests:

19. Parents' rating of child as inquisitive (curious):
(a) Physically 1 2 3 4 5
highly ____________________not at all

20. (b) Verbally 1 2 3 4 5

21. Parents' rating of child rearing practices:
1 2 3 4 5
strict (autocratic) ____________________lax (permissive)

22. Would decision have varied if child had been of opposite sex?
1-yes 2-no

23. Observance rating of home as evidence of cultural-economic status:
1 2 3 4 5
superior ______________________________ very poor

APPENDIX J

PAPERS PUBLISHED OR READ AS PART OF DISSEMINATION ACTIVITIES

PAPERS PUBLISHED OR READ AS PART OF DISSEMINATION ACTIVITIES

The list is in alphabetical order by senior author. Certain papers were presented, with minor modifications in content, at several meetings, and those are indicated with places and dates.

Barney, W. David: Early admission to schools for mentally advanced children: an aspect of flexible admission and progression. Delivered at national meeting, Conference on Critical Issues, State Department of Education Directors of Programs for the Gifted, Pittsburgh, Pa., March, 1963.

Barney, W. David: The Warren project on effectiveness and feasibility of early admission to schools for mentally advanced children. Delivered at the following meetings:
- Warren County (Pa.) Medical Association, March, 1963
- International Council for Exceptional Children, Philadelphia, Pa., April, 1963
- Faculty and Students, School of Education, Michigan State University, April, 1963
- Faculties of Warren (Pa.) Junior and Senior High Schools, May, 1963
- Erie (Pa.) Kindergarten Teachers Association, May, 1963
- U.S.O.E. Talent Development Conference, Region IV, Charlottesville, Va., May, 1963
- Combined meeting of State Directors of Education for the Gifted, Talent Development Project Directors, Director of Special Education, and State Directors of Curriculum Development, Atlanta, Ga., June, 1963
- Faculty and students, School of Education, University of Virginia, June, 1963

Barney, W. David: Mentally advanced children and early school admission: studies in effectiveness and feasibility. Delivered at national meeting, American Association for the Advancement of Science, Philadelphia, Pa., December, 1962

Birch, Jack W.: Early admission to school for mentally advanced children. Delivered at American Psychological Association, New York City, N.Y., August, 1961

Birch, Jack W., Barney, W. David, and Tisdall, William J.: Early admission of able children to school. School Life, June, 1964. Parts of the above were also delivered as papers by the various authors at the following meetings:
- American Educational Research Association, Atlantic City, N.J., February, 1962
- National Education Association, Denver, Colorado, July, 1962
- Pennsylvania Elementary School Principals Association, Wernersville, Pa., October, 1962
- Regional Elementary Education Conference, Bloomsburg, Pa., October, 1965

Birch, Jack W.: What does school readiness mean? Delivered at American Psychological Association meeting, Chicago, Ill., September, 1965

Marks, Claude E.: Early admission of able children to school. Delivered at Council for Exceptional Children, Portland, Ore., April, 1965

Tisdall, William J., Birch, Jack W. and Barney, W. David.: Early admission to school for selected children. Delivered at Council for Exceptional Children, Chicago, Ill., April, 1964

Tisdall, William J. and Birch, Jack W.: The School Psychologist in a program of early admission for mentally advanced children, 3:3 Spring, 1965 pp. 48-55 - Journal of School Psychology.

Whipple, Carl E.: Educational programs for mentally gifted pupils, School District of Warren Borough. Submitted to Pennsylvania Department of Public Instruction, Harrisburg, Pa., October, 1963.
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